THE BUILDER

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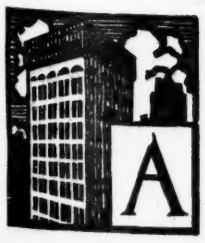
A German Professor on Sewage Treatment.



BOOK on sewage treatment, written by a German professor,* has recently been translated into English, and is of sufficient importance to warrant us in reviewing it at some length. Our first thought on glancing over the synopsis of chapters and the list of illustrations was that it would not add much to the knowledge already possessed by English readers. So much of the matter in it is derived from British and American sources—about forty consecutive illustrations out of a total of 147 are of British origin, and these are not all—that we were inclined to class the book as little more than an English translation of a German version of an English original. Throughout the book there are many references to English legislation, experiments, methods, and appliances, but these are not the only contents, and after carefully reading the whole, we have no hesitation in acknowledging the truth of the translator's statement that "the book may be read with profit by all interested in the sewage problem." We may add that it will be of special interest to British readers on account of the author's comments on much of the pioneering work done in this country. It does not always minister to our vanity to see ourselves as others see us, but it is often profitable, especially if the others are impartial and intelligent foreigners who have thoroughly studied the subjects on which we pride ourselves. Such an impartial and intelligent critic is Dr. Dunbar.

The book is divided into two parts. In the first part, which deals with the "Historical Development of the Sewage Problem," English legislation is passed in review, and some very pertinent criticisms are made, particularly with regard to provisos which have rendered some of our Acts of Parliament almost useless. Credit, however, is given to the various Commissions on rivers pollution and sewage purification, and justice is also done to Sir Edward Frankland. "It is undoubtedly a fact," writes Dr. Dunbar, "that Frankland's conclusions, based as they were on excellent experiments, have formed the foundation for all further progress relating to sewage-purification up to the present time," but Frankland's recommendations, it is added, "found little sympathy in England." Perhaps one cause of this lack of sympathy on the part of English engineers and chemists may be found in the attitude of the Local Government Board, which, as the author truly says, has "exercised a somewhat fatal influence on the development of the problems of sewage disposal and rivers pollution down to very recent times, not for want of good intentions, but rather as a result of its bureaucratic constitution."

English Acts of Parliament are somewhat severely criticised, but in view of the Reports of the Royal Commission on Sewage Disposal it would serve no useful purpose to pass these criticisms in review. The history of the subject is at the moment of less importance than its practical development, and with two short quotations we must pass from Dr. Dunbar's historical survey, interesting though it is, to the chapters of more immediate utility in the second part of the book. The first quotation is an acknowledgment of Germany's indebtedness to England in this matter: "The experience which has been gained in England by the expenditure of enormous sums of money will be to Germany's advantage, and it is to be hoped that Germany will not find it necessary to pay as dearly for experiments which often proved fruitless, and which the position of affairs in England made absolutely necessary." The second quotation is somewhat similar, and serves to indicate in a sentence the contents of the second part of the book: "All experiments in Germany, until within the last decade, have been framed upon English experiments."

The second part of the book is entitled "The Present Position of Sewage Treatment," and contains seven chapters, of which the first two, on the characteristics of sewage and the objects of purification works, are very short, and need not detain us. The next chapter runs to fifty-eight pages, and describes various methods for the removal of suspended matters from sewage. It is divided into six sections, dealing with detritus tanks, sieves and screens, grease extraction, settlement, septic treatment, and precipitation. The greater part of the matter in this chapter is familiar to English readers, but the section on screening shows considerable divergence from the methods adopted in this country, this being due to the fact that in Germany screening (without further treatment) is now regarded as an adequate method of purification in all cases "where sewage is discharged into such large rivers that a suitable dilution of the sewage is attained."

Coarse filters, which are still used in some towns in England, are described as "primitive arrangements," which "either soon clogged up or gave rise to nuisances in the neighbourhood." Simple gratings and sieves placed in the current of the sewage are shown to be inadequate. Some kind of mechanical apparatus is required if the suspended matters are to be removed economically and in sufficient quantities to render further treatment unnecessary. The revolving screen, made by John Smith & Co., of Carshalton,

* "Principles of Sewage Treatment," by Professor Dr. Dunbar, Director of the Hamburg State Hygienic Institute; translated by H. T. Calvert, M.Sc., Ph.D., F.I.C., Chief Chemical Assistant, West Riding of Yorkshire Rivers Board. London: Charles Griffin & Co. 1908.

is praised for its simplicity and satisfactory working, and Latham's disc screen in use at Croydon and Rhyl, is among the other British apparatus described. The most important of the German inventions are Schneppendahl's winged screen, and Riensch's disc sieve. The former has five screens attached to a shaft, the cross section having the appearance of a five-spoked wheel without a rim; the bottom of the sewer is hollowed out so that in any position of the screen—which is revolved by mechanical power against the current of the sewage—the entire cross-section of the sewer is closed by one of the wings. The solids are raised out of the sewage and brushed off mechanically into troughs. Riensch's disc sieve consists of a slightly-tilted drum with a rotating sieve in the upper end; the sewage flows on to the top of the sieve, passes through it, and escapes through an opening in the side of the drum; the solids retained on the sieve are carried around beyond the sewage by the rotation of the sieve, and are swept off by rotating brushes into a trough. The extraction of grease is often a matter of considerable importance, if biological methods of purification must be adopted, but in Germany, as in England, the grease recovered does not pay for the cost of extraction from ordinary sewage. One of the simplest kinds of apparatus described is a grease-trap on a large scale, consisting of four cylinders with annular spaces between, the innermost cylinder being closed at the top like a bell; the sewage flows on to the top of the bell and escapes at the top of the space between the two outermost cylinders.

The section on settlement or sedimentation contains descriptions of British and German tanks and apparatus for sludge-removal, including Mairich's cellular tanks and Fidler's and Ashton's sludge apparatus; but we must pass on to the section on septic treatment. The advantages of this method, as stated by Dr. Dunbar, appear to outweigh the disadvantages. The principal drawback is that biological after-treatment is usually more difficult with septic tank effluent than with fresh sewage settled or carefully screened. This view, we may say, is borne out by the Royal Commission on Sewage Disposal. The foul smells due to the escape of gases from the tank effluents can, in part, at least, be prevented in a simple way described by the author in a later chapter; experiments showed that by introducing a layer of iron shavings, in the form of a mattress, into the septic tank, the sulphuretted hydrogen, which is the most objectionable of the gases, was "fixed and remained largely in the septic tank." One of the most interesting portions of the author's account of septic treatment is that dealing with the solubility of organic substances. By suspending in septic tanks a number of organic solids, such as vegetables, turnips, potatoes, bread, fat, dead bodies of animals, etc., he found that many of them were almost completely dissolved in from three to four weeks, while similar solids suspended in pure water "remained almost unattacked" during the same period. The action was nearly as rapid in fresh sewage as in septic, but was much retarded in stagnant sewage; therefore septic tanks should not be too large, and should be designed without "dead" spaces. It has hitherto been the general opinion that the reactions taking place in septic tanks are due to the action of bacteria, but Dr. Dunbar maintains that this is an assumption made without experimental foundation, and believes that the forces causing the solution process are enzymes developed within the organic substances themselves. We may point out that enzymes are chemical substances possessing the power of inducing fermentation, and are not, like bacteria, living organisms. The process of decomposition may be more rapid in the presence of bacteria, but it can be carried on by enzymes alone. In sewage, however, there is probably a combination of forces, and Dr. Dunbar has instituted a new series of experiments for the purpose of throwing more light upon septic action. So far his experiments "indicate that nature supplies the necessary bacteria just where they are required to decompose putrescible matter, and at the same time supplies enzymes which are capable of aiding the action of the bacteria."

The next chapter deals with methods for the removal of putrescibility from sewage, and is the longest and most valuable chapter in the book. Four methods are described, namely, surface irrigation, land filtration, artificial biological methods (contact-beds and percolating filters), and Degener's lignite method. The last is a costly system, which is not likely to be adopted in this country. Of the others, Dr. Dunbar has no doubt whatever that percolating filters are under ordinary circumstances the best; irrigation and land filtration may, however, under favourable conditions, be suitable for towns of moderate size, but not for large cities. Much has been written about the excellent results obtained at the Berlin sewage farms, but Dr. Dunbar regards them as temporary expedients, and thinks that "many of us will live to see the day when Berlin will sell its irrigation farms for building purposes, and construct artificial biological works in their place." This is a noteworthy utterance, and it is unnecessary for us to say more about this part of the subject. We pass on, therefore, to the question of artificial filtration. Here, again, we find much that is interesting. Many observers have been puzzled by the apparent rapidity of the purification effected in a percolating filter; the tank effluent passes through such a filter in a few minutes, and is changed in its passage from a more or less foul and opaque liquid to a clear and non-putrescible filtrate, differing in a marked degree in chemical composition and in its bacteria. The theory that micro-organisms can mineralise the highly-complex organic matter in such a short time is inadmissible, and the author assumes, in company with some English bacteriologists, "that the dissolved organic matters are first separated from the sewage during its passage through the filter, and are retained in the filter to be decomposed and oxidised by the micro-organisms during the succeeding period of rest." The coarser suspended solids may, of course, be retained mechanically by a filter as by a sieve, but mechanical filtration does not account for the retention of organic matter in solution. Chemical combination is also not the cause. There remains the "absorption," or, as it is termed in England, the "colloid" theory, and this the author believes to be correct. Experiments are quoted to show that the gelatinous film which forms on the particles of which the filter is composed absorbs organic matter from the sewage, and that this organic matter is gradually broken down by the action of micro-organisms, and finally oxidised by the air drawn into the pores of the filter. The absorptive action is "quickly exhausted by excluding either micro-organisms or atmospheric oxygen."

As we have already said, Dr. Dunbar is in favour of percolating filters, and as a result of experiments he advocates some modifications in their construction. The body of the filter ought, he says, to be of very coarse material, and above this there ought to be a layer of the size of walnuts, then a 4-in. layer of 10 to 30 mm. material (say, $\frac{3}{8}$ in. to $1\frac{1}{8}$ in.), another layer of 3 to 10 mm. material (say, $\frac{1}{8}$ in. to $\frac{3}{8}$ in.), and a surface layer of very fine material from 1 to 3 mm. (say 1-24 in. to $\frac{1}{8}$ in.). The intermediate layers are introduced for the purpose of preventing the fine material from being washed into the body of the filter, and the surface layer is designed to distribute the sewage equally throughout the material below. Particulars of the aeration and working of filters of this kind are given, and there are illustrations and descriptions of other types of filter and of different kinds of apparatus for distributing the sewage.

Later chapters deal with the disinfection of sewage, the supervision of sewage-disposal works, and the utility and cost of various methods of sewage disposal; but we have said enough to show that the book is one which can be recommended to English readers. A word of praise is due to Mr. Calvert for the excellence of his translation, and for the full index which concludes the book.

NOTES.

Winchester Cathedral.

OUR readers will probably remember that the remedy proposed by Mr. Jackson for the outward movement taking place in the wall of the south nave aisle of Winchester Cathedral was to apply steel tie bars extending across the aisle and to underpin the wall. Since that proposal was made the fabric has been under continuous examination, with the result that considerable, although gradual, movements have been observed. The extent of the movements is such that Mr. Jackson now believes it would be preferable to build buttresses outside the wall in question. Irrespective of æsthetic considerations, there is no doubt that the adoption of buttressing will provide more adequately than tie bars the increased resistance necessary, for instead of involving strain on existing parts of the structure it will bring to bear the additional and independent resisting force represented by the reaction of the earth outside the cathedral. The new buttresses will necessarily be undesirably conspicuous for a good many years to come, but apart from the freshness of the masonry they will not be out of keeping

with the general character of the fabric, especially in view of the fact, pointed out by Mr. Jackson, that William of Wykeham long ago applied buttresses with a similar object to the north side wall.

Modern German Architecture.

WE get a good idea of the work of the modern school in Germany from a monthly periodical entitled "Moderne Bauformen," *i.e.*, Modern Buildings. This is a collection of some sixty illustrations recording all that is newest in the designing of German buildings, both internally and externally. A number of the illustrations are full-page coloured plates of considerable beauty, showing decorations and colour schemes for bedrooms, sitting-rooms, halls, etc. This month's number is almost entirely devoted to the works of two men, Alfred Grenander, of Berlin, and Rudolf Bitzan, of Dresden, who through the originality of their style cannot fail to leave their mark on the development of modern architecture. Grenander's peculiarity lies in his pliability, his power of adapting his style to circumstances. He has given Berlin, that conservative colossus, two novelties, neither of them monumental, but which bring a much-needed new note into street architecture, *i.e.*, newspaper kiosks and the underground railway. His work is rather picturesque than architectonic, piquant in form, original in colouring. From the appreciation accompanying his designs, some of whose sentiments, however, we cannot echo, we learn that his underground stations, constructed of iron and coloured tiles, are dainty and charming in appearance. The metal assumes living and expressive shapes which have a peculiar beauty, a characteristic charm of their own. At the same time, these forms are logical and reasonable, the outcome of surroundings and of the nature of material. The newspaper stalls are described as jewels strewn in the streets, twinkling like little Japanese gateways. Their perky, daring roofs recall the wood architecture of small Swedish churches. All the sparkle and glitter comes from constructive material, and the effect produced by coloured advertisements, papers, and books has all been taken into account in the general scheme. Play of fancy and nervous movement are the characteristics of this artist, who is gathering a large following and gaining in questions of culture an influence which cannot but be beneficial to Berlin. The work of Rudolf Bitzan is very different. Its peculiarity lies in the fact that it is in direct contrast to the accepted principles of design. His architecture is deliberately silent, not expressive; the exterior does not reveal the purpose of the building, neither does the design seek to express itself. No parapet, cornice, or overhang emphasise the line of the immense roofs, which are shorn off at the wall face; no moulding or ornament gives prominence to openings in the wall; no features arrest the eye. And yet, in spite of this reserve, the designs have a strong individuality which excites curiosity and rivets the attention. Ornament is used so sparingly even internally that we are reminded of the Pompeian house where decoration was looked on as something sacred and not lightly to be handled. According to his critic, Bitzan's interiors are incomplete until they are filled with the human beings for which they are designed. These bring the form and colour, the light and shade for which the interior is but a setting. Herein lies the perfection of internal architecture, and herein lies Rudolf Bitzan's strength.

American Timber.

ABOUT twelve months ago considerable prominence was given in the daily Press to the approaching scarcity of commercial timber. The matter served its purpose for the publication of sensational headlines, but only for a few days, and so far as the general public are concerned the subject is forgotten. Timber consumers, however, have no reason to abate their efforts for the conservation of forest resources throughout the world. Recent official estimates show that in the United States the annual forest growth is less than one-third of the consumption. The situation is aptly illustrated by a recent report of the Connecticut State Forester, giving valuable details not generally available. In New Haven County, for instance, it is stated that for the year 1907 the timber cut was 120,000 cords, while the annual growth on all types of forest land reached the total of only 70,000 cords. The net reduction of 50,000 cords a year means that supplies of merchantable timber in the county will be exhausted in something like twenty years. The case of Connecticut is more or less typical of other States in America. It does not imply that every tree will be cut and the ground left bare after a comparatively short period, but that continued depletion at the present rate will so reduce supplies as to make it both difficult and expensive to obtain timber of useful size in adequate quantities.

The Preservation of Wood.

A REPORT by the Committee on Wood Preservation of the American Railway Engineering and Maintenance of Way Association gives the summarised experience of thirty-six railway companies relative to the efficiency of various timber-preserving processes. Creosote is considered to be capable of preserving piles for twenty-five or more years if injected to the amount of from 16 lb. to 24 lb. per cubic foot. The same material cannot be relied upon to preserve sleepers for more than about nineteen years unless the timber is protected against mechanical injury, and if not properly injected the sleepers will decay in from five to twelve years. Zinc chlorite as applied in the Burnet process is said to insure the average life of from ten to fourteen years, the quantity of material required ranging from $\frac{1}{4}$ lb. per cubic foot in dry climates to $\frac{1}{2}$ lb. per cubic foot in moist and warm regions. The zinc creosote process has been introduced too recently into America for the production of adequate data, but we may point out that in Germany it has given the life of from twelve to eighteen years to railway sleepers. The final conclusion of the Committee is that, however carefully timber may be treated, it is always necessary to bear in mind the probability of destruction by mechanical agencies long before decay has assumed serious proportions.

Sewage Disposal.

SCARCELY a month passes without witnessing the discussion of one or more papers by scientific bodies of the all-important question of sewage disposal. The methods hitherto adopted for dealing with residual solids involve the ratepayers in considerable expense, and in many cases are productive of annoyance to the residents in neighbourhoods where sludge is employed for the fertilisation of land. In a paper read by Dr. J. Grossmann to the Congress of Applied Chemistry it is suggested that sewage sludge should be treated for the recovery of the fatty acids which come from domestic sources, and more particularly from soap used to the extent of some 400,000 tons per annum throughout the country. Dr. Grossmann estimates the average profit obtainable by his process for a town of 100,000 inhabitants at about 2,000*l.* a year. As an installation will soon be in regular work on a large scale at the Oldham Corporation Sewage Works, public authorities will before long have the opportunity of judging for themselves as to the feasibility of the new process described by Dr. Grossmann. The idea is distinctly good, and one very appropriately brought before the attention of the numerous chemists assembled in London from all parts of the world.

The "Mild" White Lead Process.

THE "mild" process of making white lead, which was invented by W. H. Rowley in the early years of the present decade, is now being used on a large scale in America, and an interesting account of the process and its product was recently communicated to the New York section of the Society of Chemical Industry by Dr. Holley. It is said that the white lead produced by this process is a basic carbonate quite equal in quality to the best white lead produced by the Dutch or any other process. In working the process the workmen do not come in contact with the lead either in the form of dust or by handling. The first stage of the process consists in obtaining metallic lead in a very fine state of division. This is effected by conducting molten lead through a heated pipe to an "atomiser," in which the lead meets with a current of superheated steam under high pressure. Streams of atomised lead thus produced are directed downwards in a steel chamber, the bottom of which is covered with water two feet deep. The lead is deposited in the bottom of the chamber in the form of a heavy soft mud, and is then conveyed to the oxidisers and mixed with water. A current of air is blown through the oxidisers while the contents are mechanically agitated. Most of the lead is converted by this treatment into basic lead hydroxides. The mixture of hydroxides and water is conveyed to a storage tank, and from thence to the carbonators. The carbonators are large wooden cylinders in which the lead

hydroxides are agitated with carbon dioxide. The basic carbonate or "white lead" produced in this way is drawn from the carbonators in the form of a thin paste, and is pumped into the drying pans and dried in the usual manner.

The Evolution of Electric Supply.

THERE have been few industries that have been more affected by the rapid progress of scientific invention than the supply of electric-power for lighting and heating. A survey of the systems in use throughout the country shows the steady progress of evolution leading to the survival of those systems of supply which prove financially successful. Many of the methods originally adopted were standardised too rigorously, and so could not take advantage of the recent improvements in electric lamps and radiators. In designing the stations our engineers had the benefit of the experience gained, often at considerable loss, by the pioneer companies in America. But in many cases they made the mistake of underestimating the antiquation factor. In a few cases entirely novel systems were adopted. One of these, known as the "Oxford" system, was to generate direct current electricity at high pressure and distribute it to substations where it was converted into low pressure by motor-generators. This system is no longer used in Oxford, and we were sorry to see that the Town Council of Walsall, who also adopted it, recently considered the advisability of "scrapping" it altogether, as they have been working it at a loss for the last fourteen years. In our opinion the moral to be drawn is that inflexible systems should not be adopted. Replacing reciprocating-engines by turbines is merely a temporary alleviation. It is probable that gas-engines will soon replace turbines. Constant attention has to be paid to the latest discoveries of science, and no reasonable expense should be spared in the endeavour to keep thoroughly up to date.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

ANNUAL DINNER.

THE annual dinner of the Royal Institute of British Architects was held on Wednesday last week in the Banqueting Hall, Whitehall Rooms, Hotel Metropole, W., Mr. Ernest George, President, in the chair. There were also present Messrs.:—

Maurice B. Adams
Sir Lawrence Alma-Tadema, O.M., R.A.
J. Macvicar Anderson, F.R.S.E., Past-President
John A. F. Aspinall, President, Institution of Mechanical Engineers
R. Frank Atkinson
Maxwell Ayrton
Frederick Batchelor, A.R.H.A., President, Royal Institute of the Architects of Ireland
Herbert Batsford
Sir Melvill Beachcroft, Chairman, London County Council
W. C. Beetles
B. E. Bell
H. F. Bidder
Professor Reginald Blomfield, A.R.A.
Detmar Blow
Edward Boehmer
G. E. Bond, President, Society of Architects
Alderman Sir T. Vansittart Bowater
Thomas Brock, R.A.
C. W. Brooks
F. S. Brown
George T. Brown, President, Northern Architectural Association
John J. Burnet, A.R.S.A.
James T. Cackett
Rhodes Calvert
Vere Calvert
Sydney H. Caslon
Walter Cave, President, Architectural Association
Christian Christensen
F. Dare Clapham
Max Clarke
S. D. Clippingdale, M.D.
Thomas E. Collcutt, Past-President
John Collings
Howard Colls
A. S. Cope, A.R.A.
Hubert C. Corlette
J. D. Crace, President, Institute of British Decorators
Alfred W. S. Cross
Arthur G. Cross
E. Guy Dawber
Frank Dicksee, R.A.
Rudolf Dircks
R. S. Dods
C. Fitzroy Doll
David G. Driver, Secretary, Architectural Association
F. Eilbart
Sir William Emerson, Past-President
Frederick R. Farrow
T. Phillips Figgis
William Flockhart
Frank Fox
Arthur Franklin
Percival M. Fraser
Edward Gabriel
Matt Garbutt
Alan George
Ernest George, President
J. Melton Gibbs
James S. Gibson, Vice-President
G. L. Gomme, F.S.A., Clerk, London County Council
Montague Goodall
Alexander Graham, F.S.A., Hon. Secretary, R.I.B.A.
J. Braidwood Gray
Edward Greenop
Edwin T. Hall Vice-President
Stanley Hamp
F. H. A. Hardcastle
Henry T. Hare
Ewen Harper
W. H. Harrison
Edward Haslehurst
Charles Heathcote
George T. Hine
George Hornblower
E. J. Horniman, M.P.
Sir Henry Howorth, K.C.I.E.
George Hubbard, F.S.A.
A. A. Hudson
C. E. Hutchinson
Edward B. I'Anson
G. Thrale Jell
Harry Osborn Jenkyn
Joseph Jennings
J. J. Joass
J. Keeble
Otto Kyllmann
P. Ogden Lawrence, K.C.
W. H. Lever, M.P.
Sir James Linton, R.I.
W. J. Locke
T. H. Loveless
Edwin L. Lutyens
Ian MacAlister, Secretary, R.I.B.A.
J. Y. W. MacAlister, F.S.A.
Mervyn Macartney, F.S.A.
Bertram McKennal, A.R.A.
Sir Charles McLaren, M.P.
Herbert C. Marshall
W. H. May, President, Devon and Exeter Society
E. Vernor Miles
Professor Gerald Moira
P. A. Molteno, M.P.
H. Percy Monckton
H. Greville Montgomery, M.P.
Albert W. Moore
Philip Morrell, M.P.
Henry Morris, President, Royal College of Surgeons
Alan E. Munby
John Murray
G. Ernest Nield
Philip Norman, F.S.A.
George Northover
Paul Ogden
C. Stanley Peach
Captain Walter Peake
H. A. Pelly
S. Perkins Pick
S. Wilfred Pike
William A. Pite
Horace Porter
W. E. B. Priestley, M.P.
Charles H. Read, LL.D., President, Society of Antiquaries
Professor C. H. Reilly
F. G. Rice, President, London Master Builders' Association
W. E Riley
Percy Robinson, President, Leeds and Yorkshire
William Robinson
Reginald St. A. Roumieu
Ernest Runtz
E. Monro Runtz
J. S. Sargent, R.A.
W. Howard Seth-Smith
George Sherrin
Frank Short, A.R.A.
Gilbert M. Simpson
Graham Simpson, F.R.C.S.
John W. Simpson, Vice-President
Venerable Archdeacon Sinclair
John Slater
J. Osborne Smith
Lewis Solomon
S. A. Stanger
H. Heathcote Statham
Alexander R. Stenning, President, Surveyors' Institution
Frederick J. Stevenson
Augustus W. Tanner
Chas. Tanner
Sir Henry Tanner
Henry Tanner, jun.
W. J. Tapper
Herbert G. Tayler
Sir John Taylor, K.C.B.
A. G. Temple
Sir Brumwell Thomas
Hamo Thornycroft, R.A.
George Traill
Percy B. Tubbs
Frederick Wallen
W. F. Wallis, President, Institute of Builders
W. H. Warner
Sir Ernest Waterlow, R.A., President of Royal Society in Water Colours
Dr. R. J. Waugh
Sir Aston Webb, R.A., Past President
Maurice Webb
Thomas B. Whinney
W. Henry White
Frank W. Wills
A. Needham Wilson
George E. Withers
William Woodward
Percy S. Worthington, President, Manchester Society
Alfred B. Yeates
Clyde Young
Morgan H. Young, Master Armourers and Brasiers' Company.

The loyal toasts having been honoured, Mr. J. W. Simpson, Vice-President, proposed the toast of "The Houses of Parliament," coupled with the name of Sir Charles McLaren, M.P.

Mr. John W. Simpson, Vice-President, in proposing the toast of "The Houses of Parliament," said that without that security and peace which their wise and statesmanlike measures afford, there could be neither continuity nor advance in the art we practise. Bound in the service of that exacting mistress, architects, like other artists, remained ingloriously, though he hoped not uselessly, outside the strife of legislating parties. Perhaps it was by reason of this detachment that the architect was politically a rather curious study. His convictions might be described as those of a conscientious opportunist, and varied according to the conditions of the problem with which he was called upon to deal. Was it a scheme of improvement and rebuilding? They would find him in the ranks of the advance revolutionary Radical! He would make a clean sweep of the existing and establish a new order. Give into his hands some ancient structure of artistic interest, and where would you find so convinced an ultra-Conservative! Not a stone must be touched which could be left intact; considerations of utility fell into the remote background, and he would contend with them for the very grime which marked the structural document as authentic! Thus it would seem that while certain qualities in the temperament of architects especially fit them to assist in the deliberations of the House of Commons, there was another aspect of their professional character which would enable them without inconsistency to become Lords should their presence be preferred in the Upper House of Legislature. But to the architect the words Houses of Parliament connoted a quite other meaning than political. There was an interesting psychological experiment which consisted in ascertaining the mental image evoked by a word; thus the word "building" was found to suggest in many minds a "cathedral," in others a "factory." So to an architect the Houses of Parliament meant the splendid monument we owe to the genius of Sir Charles Barry—that subtle combination of our wayward native Gothic detail with the great Classic tradition of balanced disposition and plan which was the glory of the profession. A building before which the austere training of the French and the instinctive love of the picturesque of the English alike bare the head and salute the master who created it; and if they as architects acclaimed the worth of the building it was because it was, as was proper to their art, a symbol and an expression of the worth of its occupants.

Sir Charles McLaren, M.P., in reply, said that Lord Plymouth, who was to have responded to the toast, but who was unable to attend on account of indisposition, was one of those men whose names would always be associated with those who took an interest in art. He (the speaker) was a member of an inferior assembly, but one whose connexion with art was traditional in voting more or less cheerfully large sums of money to be expended under the auspices of architects and others. The House of Commons might be considered an enemy of architecture rather than a friend, for if they went back over its history they would find that it had done more in the way of pulling down our ancient monuments than in building them up; but that was perhaps due to the fact that politics and art had never been very close friends—except, perhaps, in the case of the Florentines, when politics and art were very close together. The House of Commons was always willing to vote money for architectural and artistic purposes. It was the Treasury, not the House of Commons, who were responsible for the stingy grants given to artistic purposes in this country, and the Treasury, he was afraid, acted too often as an extinguisher on the heroic resolutions and aspirations of the members of the House of Commons. Really, he could not help thinking that the House of Commons and the House of Lords ought to have done more in the past for the architecture of our country. They might have done something in the past to discourage the leasehold system that had filled London with streets of squalid tenements, while some cities of other countries would last for all time. London had not the grand avenues of Paris, the Ring Strasse of Vienna, or the spacious avenues of Washington, but it contained many fine monuments, and it was a city of contrasts, as it always would be, in architecture as in everything else. He was not sure that he did not prefer the picturesque crudities of our London streets, adorned by works of our modern architects, to the somewhat grand regularity of modern cities of the Continent. With all our restricted resources, we had as beautiful a collection of buildings, as interesting historical monuments in London as would be found in any great architectural centre of the world. He sometimes dreamed dreams and thought there were opportunities which might be seized in our great metropolis. For instance, he hoped to see the day when some rich man, if Parliament would not help, would take in hand Hyde Park Corner, and give

us a magnificent opera-house in place of the hideous hospital that now disfigured the place. He hoped that Parliament would provide money to give a new front to Buckingham Palace, and he was encouraged to think so when he looked at the great work done since the accession of the King in beautifying the Mall and St. James's Park—a fine monumental work due to the genius of Mr. Brock, splendidly displayed in the great avenue which Sir Aston Webb had done so much to improve. We owed a great deal to the King, who had lent his influence to the embellishment of London, and the King had been most ably assisted by Mr. Lewis Harcourt, the First Commissioner of Works, who understood such matters, and who was prepared to do all he could in the matter if the Treasury would allow him to carry out that work to its full consummation.

Professor Reginald Blomfield, A.R.A., then proposed the toast of "Art, Science, and Literature." He said that art and science had a familiar ring to architects, because they were taught in their youth that architecture was a science and art, but unfortunately their tutors omitted to teach them how it was either one or the other; and when in later years they came to test this by their own experience, they found that the opportunities for art were somewhat rare, that the science of architecture was not all that they should desire it to be, and that the pursuit of architecture in this country was an extremely arduous and exacting profession. He would not harp on that familiar string. He thought he might take it for granted that all architects worthy of the name were artists—if not in attainment, at any rate, in intention; and what helped them in their work, in the practice of architecture, was the art of it. It had a fascination for them which was denied to more prosaic callings. Blowing one's own trumpet was not considered right, but he thought he might venture on a few remarks in praise of his artistic brethren. He had read in the *Times* of the previous day some remarks by an extremely competent writer, who said that he considered the standard of architecture in this country at the present time was higher than it had been since the XVIIIth century. That was an extremely interesting compliment to architects, and he believed it was a perfectly well-founded one. If they kept their eyes open, they would find a great quantity of excellent work being done in London and all over the country; and when he said that he was not referring to men of established reputation only, but to many men whose reputations at present had not reached the dimensions they would ultimately reach, for they were doing admirable work. Yet he was afraid that in spite of that—and it was a painful fact—architecture at the present time in this country did not meet with the recognition that it deserved. Who was responsible for that? Was it the public? He did not think it was; besides, the public were the employers of architects, and it would be unwise to say anything against one's clients. He thought the fault was due to the gentlemen through whose eyes the public were made to see all artistic creation. There were, he was glad to say, critics of knowledge and discrimination, who handled the art of architecture with the utmost intelligence and sympathy. The remarks in the *Times* he had referred to and many other articles in that great paper seemed to bear him out; but there were other critics or writers who treated architecture as a very useful stick with which to belabour individuals or institutions of whom or which they personally disapproved. He did not think he need particularise the arenas in which these gentlemen disported themselves. Lastly, and this was the unkindest cut of all, there were writers who ignored the existence of architects and architecture altogether; they did not recognise the fact that at the present time there were a number of able men who were devoting themselves to the practice of the art. He did not think this was as it should be. Architecture had been in the past a great art and had occupied a great place; and when one considered all the ability displayed in architecture he could not help thinking that their art ought to occupy that place again. It ought to take its place—as he believed it would ultimately—amongst the sister arts as their coadjutor and ally, not as their dictator. As to the sister arts of painting and sculpture and the beautiful art of music, he need not say much. All of them loved those arts and found in them the source of the most intense pleasure they were capable of enjoying, and he could do no more than offer representatives of those arts his congratulations that their work lay in such happy places. No doubt all had read the recent remark of Mr. Briton Rivière, who said that he considered that anyone who had the good fortune to be a landscape painter ought to consider that that fact alone was worth 1,000*l.* a year to him apart from any petty considerations of cash received. He had no doubt that the artist's banker would have something to say about it, but in any case their painter friends would endorse what Mr. Riviere had said. Sir Charles McLaren had anticipated a remark he (the speaker) wished to make as to the work in the Mall. He should like to pay his tribute of the admiration which they all felt for the splendid beginning of Mr. Brock's great monument—not only for its consummate technique, the fine spaciousness of its design, but for that personal quality which appealed to them all. Mr. Brock was not only a fine artist, but he was also a fine Englishman, who had translated into his bas-reliefs that feeling for the life of the open air and sea, which was one of the qualities of the race. He thought that Mr. Brock and his colleague, Sir Aston Webb, had gone far to remove the reproach which was sometimes levelled at Englishmen that they are incapable of dealing with monumental design. As to science, of the benefits conferred by the masters of medicine and surgery they were sensible every day of their lives, and one of their qualities that he greatly admired was their absolute unselfishness. The way in which a scientific man, having made a discovery, refrained from taking out a patent on it and so making his fortune, but rather handed it over to his brethren and practically presented the result of his labour and genius to the world, showed the high aims and ideals of science. As to applied science, probably the form which appealed to them most was engineering, and English engineers had always ranked high in the world, and they saw monuments of their skill and knowledge in every quarter of the globe—the great bridges, the embankments, aqueducts or barrages, reclaiming immense tracts of barren land. And the achievements of the mechanical engineer were scarcely less wonderful—or those tremendous engines of warfare which by some grim irony seemed to keep pace with each advance of civilisation. A fine work of engineering would always appeal to architects and all artists, because such a work represented the most perfect expression of adaptation of means to end. But there was one criticism he should venture: the engineer seldom failed, but when he did it was because he forgot his proud prerogative and imagined he was an architect. There had been cases in which the engineer had decorated his building, and the result had been a perfect orgy of irrelevant ornament. If the ornament were cut away one saw the element of stark inimitable strength which was the glory of the engineer and the despair of the much harassed architect who had to make bricks with straw. As to literature, he felt on a little more familiar ground, because most of them had dabbled at some time or other in literature, and some of his friends said he ought to call himself a literary man. He would willingly do so if he felt in the least qualified, and also were it not for the fact that he liked architecture and its practice. He thought, however, he could claim a profound belief in and love for literature. He thought the literary habit, the faculty of looking around a subject, and the power of detachment, even of humorous detachment, from the problems of life, were scarcely less important than the scientific intellect. Perhaps the scientific intellect burnt with too intense a light and lost something of the half-lights and dim perceptions of the ultimate possibilities of life. Then there was the important *rôle* of the king-maker—the maker and unmaker of reputations, and possibly in these days of booming these gentlemen were too much in evidence; they performed their functions with indomitable apiomb and a perfect irresponsibility. At the same time they must all recognise that the literary man in this sense was an indispensable person. There were great men before Agamemnon and fine sculptors before Phidias, but they knew nothing of them because, as the most brilliant literary man of their time had said, there was no one by to put in "the harmless necessary word." This *rôle* of the literary man was highly important, but the literature which meant most to them was that dealing with the imagination—that which had the power of taking them out of their daily lives and transporting them into the world of romance, making them think for once in their lives that they were performing prodigies of valour or producing consummate works of art. He recollected a story of Stevenson, who used to say that he liked to imagine himself galloping across country at the head of a regiment of cavalry, which was the last thing in the world he was physically capable of doing. But there Stevenson struck the real note of genius—the golden power of the imagination, shedding its light on the dull realities of the world, that power which made them assign to the literary man of genius a possibly higher pedestal than they should give to the great artist or man of science. Within the last few weeks two such men had left them, two of the most striking and picturesque figures of the great period which was now drawing to its close. The world was poorer for their loss. But it was not for them to look back, but rather to look forward, and to the rising generation to carry on the great traditions of the mighty men of the past. He had to couple with the toast the names of three distinguished men—the toast of Art with the name of Sir L. Alma-Tadema, in whom he did not know whether to admire most his splendid vitality or his technique, which seemed to get finer and finer the older he grew; with the toast of Science he coupled the name of Mr. Henry Morris, President of the Royal College of Surgeons, one of the benefactors of the race he had already referred to; and with the toast of Literature the name of Mr. W. J. Locke, the "beloved vagabond" who had deserted the thorny paths of architecture for the more brilliant realms of literature.

Sir Lawrence Alma-Tadema, O.M., R.A., in reply, said the word "Art" was one of those which awoke in us great thoughts, but the art of explaining what art is remained as in a closed book. One could at most suggest what the meaning of art might be. Some years ago the King of Sweden, at a Royal Academy banquet, said, "Art is the flower of the tree of life." That struck him as being a fine thought, and he remembered it when he was last week-end in a beautiful part of the Thames Valley. The blossoming trees were beautiful, and made one forget how forlorn the world looks in winter. Surely our life would be as barren as trees in winter if we had not the flower of art to embellish it, to cheer us and make us feel happy. That day he had been to the Mall and had seen the beautiful new work there which was full of grandeur and impelled him to say what a wonderful thing architecture

is and how proud we should be to think that our architects made the world more beautiful. He expressed his thanks and the thanks of the public for all they owed to architects for their works up and down the country, especially in London, where the days were often grey.

Mr. Henry Morris, M.A., M.B., President of the Royal College of Surgeons, who responded for Science, said that science was a very comprehensive term, for it included mental and moral philosophy as well as natural philosophy. In these days few men were able to speak with any authority for more than at most two or three branches of science, and anyone who could only speak for one had but an imperfect knowledge of that one branch. So connected and related were the various branches of science with one another that any great progress in one branch was conducive to a corresponding advance in several others. In no period of the history of the world had the science and practice of surgery and medicine made such extensive, such far-reaching, such rapid and, he thought he could say, such marvellous progress as during the last twenty-five or thirty years. And this was due in large part to the advances which had been made in many other sciences besides those which were immediately ancillary to medicine. Not only was there this correlation of the sciences, but science itself ought not to be regarded as a thing apart and altogether distinct from art and literature. To literature the scientist owed much for many suggestions and ideas which had led to fertile development and research; and from the arts of drawing, of colouring, of modelling he had derived invaluable assistance, for which he was also deeply indebted. In one of those many literary works—he thought it was called the "City of the Sun"—by Campanella, in which authors, following the example of Plato in his "Island of Atlantis," have chosen the description of an ideal republic as the vehicle of their thoughts; it is stated that all the women and children were considered to be the common property of the State, and that owing to the insufficient and inadequate attention which was given to education, all the children from the age of three years were taught by the State, not by means of books, but by pictures, emblazoned upon the walls of the city. The outer wall of the city had portrayed upon it the figures of the legislators and philosophers; and within were six circles of walls on which were depicted the signs and symbols of the sciences. He was not aware that in any real city this method of instruction had been carried further than in the primitive method of illustration to be seen outside shops in some cities of the Continent, to illustrate in a crude manner the nature of the commerce which was carried on within. However this might be, he was sure that science owed a deep debt to art for the assistance it derived from engravings, coloured drawings, and other pictorial illustrations. But conversely, art and literature owed much to science, though there was not time to follow that line of thought. But there was an irretrievable, an irreconcilable difference, despite the points in which these various subjects touched one another between science on the one hand and art and literature on the other—a difference which existed and must exist, and which would persist, *i.e.*, as to their aims and purposes. The goal of science was simply truth; the goal of art and literature was beauty and effect. Truth and fact were especially the objects of science; fiction was a large factor in literature; and art, in spite of the adage "True art is truth," impregnated and blent the ideal with the actual and the actual with the ideal. Poetry might be a hymn of perfection; art and poetry, by the aid of the imagination, could represent the divinity of the Gods, the sublimity of the Heavens, and the spotless purity of the angels. But equally, such were their versatility and esource, they could throw a glamour and attractiveness over vice, and lend an interest to the drama or the tragedy of crime. Science could do none of these things; she was no respecter of persons, and it was on account of her single-minded pursuit of truth that she had met with hatred and opposition, and the scientist with persecution, in time past, from the Church. He had referred to the way in which science and literature act and react upon one another, but also there were many instances of men being distinguished in both art or literature and science; and medicine had been foremost amongst the various professions in the number of men brought up in its ranks who had made themselves distinguished in art and in literature. There was Linacre, who was Professor of Greek at the University of Oxford, besides being the founder of the Royal College of Physicians; Radcliffe, whose name was associated with the Library and Hospital and Observatory at Oxford. [Mr. Morris then mentioned names of other scientific men who were more or less celebrated in literature and art, including Sir Christopher Wren, whom he described as a distinguished scientist before he became a distinguished architect.] Of Wren's work as an architect, which he believed was done at a period when the art and science of architecture was at a very low ebb, he would not venture to express an opinion. But he might be allowed to utter a regret about something in connexion with the work of that great architect. It was well known that Wren desired to build a colonnade around a piazza in front of St. Paul's much like that of Bernini's in Rome in front of St. Peter's; and it was also Wren's great desire to lay out the city of London after it had been destroyed by the Fire with broad, fine streets radiating from an open space; but his scheme was prevented by two causes, namely, the value of the land round about St. Paul's and because the other land belonged to numerous private individuals. We were suffering from the same causes now. We had long rows of narrow, dull, and dreary streets which have a depressing and a very inartistic effect on the population of this great metropolis. Wren was not only distinguished on many scientific grounds, but he was worthy of remembrance as the would-be beautifier of the streets of London.

Mr. W. J. Locke, late Secretary, who responded for Literature, said he felt that instead of presuming to address them he ought to be in a state of agitation, wondering whether anything had gone wrong with the dinner, and his friend, Mr. MacAlister, would understand what that feeling was like. Dissociated as it was that evening from art, one was always puzzled for the want of a definition of what literature is. There were certain forms of literature—there were Montaigne's "Essays," Gibbon's "Rise and Fall of the Roman Empire," which could not come within the sphere of what was ordinarily known as art; whereas imaginative literature—poetry, the higher forms of the drama, and imaginative romance—were as much art as painting, sculpture, or architecture. It was only quite lately that a suggestion had come to him, not for a definition, but for a means whereby one might form some kind of an idea of what literature is, and that was in the form of a story—a story of two working-men leaning over a public-house bar. One man says to the other, "Bill, why do you mix beer and whisky?" The other man replies, "Can't you see? If I went on drinking beer I would get full before I got drunk; if I went on drinking whisky, I would get drunk before I got full; but by mixing them, I get forrader very comfortable." And so it seemed to him that if a man mixed the ardent spirit of Shelley with the fitting prose of Gibbon he could get on very comfortably towards an idea of what literature in its combined sense really was. No one could respond to the toast of literature at the present time without a reference to the death of the great chieftain of letters, George Meredith—an event which cast a gloom over the world of letters and art. The great novels of George Meredith had always given him the impression of a cathedral in their great architectonic scheme combined with their lavish wealth of perfectly applied detail. His loss was as great as the loss of a chief in any sphere of human activity; but, as in the high affairs of State, so in the world of letters, *Le roi est mort, vive le roi*, Meredith was followed in his chieftancy automatically, unquestioned, by one whose name was always received in that Institute with pleasure, *i.e.*, Mr. Thomas Hardy, who, when a very young man, won the Institute medal. It had been a matter of great regret to him (Mr. Locke) that during his Secretaryship the Institute library had not a copy of the essay that won the prize, and all the time he had been unable to procure one; but it must be a pleasure to architects to know that out of their ranks had come the *doyen* of English letters at the present time. It was a great thing in any art that there should be one great, wise, commanding figure who held himself aloof from, and yet sympathised with, the struggles of the newer generation—one whom the newer generation could call master; one who had struggled with the powers of darkness, poverty, lack of recognition, the critics' contumely, and had come through obscurity into a blaze of unquestioned fame. It was good that such a man should be kept before the newer generation, not only as an example, but as an illustration of the remark that there were brave men before Agamemnon. There were many young Agamemnons about who might be excellent men and fine artists, but only too prone to imagine that theirs was the only generation which ever mattered, and that was a very great mistake. He had heard President after President of the Institute urge the younger men to go back to the great masters whose hands were still; and if that was so in architecture, it was profoundly true of the great art and craft for which he had the honour to respond.

Sir R. Melvill Beachcroft, Chairman of the London County Council, then proposed the toast of "The Royal Institute of British Architects and the Allied Societies." He said that no doubt the honour of proposing the toast had fallen to him because he was for the nonce the titular head of a body which had much in common with architects. One of the objects of such a gathering that evening was to afford an opportunity of comparing notes as regards the progress which was going on in our midst. It happened that this year the London County Council had entered upon its twenty-first year of existence, and, as its Chairman, he had been considering how far they could feel that during the past twenty years they had contributed to the betterment of London. On the whole, he thought he could answer the question fairly satisfactorily. The great insanitary areas which were once a disgrace to London had disappeared; our streets were better and were getting wider every day, and so far as the buildings were concerned he thought we could say they were becoming a credit to the city; while the health of London during those twenty years had vastly improved—so much so that one-third fewer people died now than was the case twenty years ago. The city, in fact, had become worthy to be the capital of the Empire. Architects, too, were asking themselves to-day this question, What of architecture? Had architecture made progress, say, during the last fifty years? Was the architecture of the XXth century likely to put into shade the architecture of the XIXth century? Some years ago a French architect who paid a visit to London remarked, "You have great architects"; and he added, "London is wonderful—*c'est grand, c'est digne, c'est beau, c'est comme un* policeman," by which he (Sir Melvill) supposed he meant that our buildings were commonplace. This is no longer an observation applicable to London. London had improved vastly during the last decade. We had left the early Victorian period behind us and learnt to follow the

lines bequeathed to us by those great masters, Inigo Jones and Sir Christopher Wren, and for this we had to thank the Royal Institute of British Architects and other kindred societies. He had been reading their annual report, and he was bound to say he had done so with much pleasure. The range of the activities of the Institute was almost as wide as that of the London County Council. The Institute had its Standing Committee, its Board of Architectural Education, as well as their Council, and the two bodies had much in common one with the other. Education was an important part of the work of the Institute, and it was now the main part of the work of the London County Council; more than half of the money that Council spent—eleven millions a year—being spent on education. As to street improvements, he thought they would do the London County Council justice and agree that in the recent street improvements the Council was gradually bringing about a better state of things architecturally in London. The Council claimed and had received the greatest possible assistance from the Institute; they believed that co-operation between the two bodies was likely to be productive of good to both and of benefit to London. They must not, however, always expect to feel satisfied with what the London County Council did, and he knew that there had been occasions when architects had had to find fault with them. For instance, on the question of the alignment of the northern front of the Strand he remembered the appeals of the Institute, and he was sorry that those appeals fell on deaf ears, not for want of sympathy, but on account of the cost involved to the ratepayers. Nevertheless, the London County Council had shown a strong desire during the last few years to improve London architecturally, and they were endeavouring to do so in conjunction and in harmony with the views of architects generally. As they knew, business and private interests must to a large extent hinder the architectural development of a great city like London; but he looked forward, as he knew others did, to a time when we might have in this country, if not a dictator, at least a Minister of Fine Arts, who might give us some lead and direction in matters of taste. The chief difficulty at the London County Council was in regard to the control of buildings. They had during the past ten years 80,000 new buildings to deal with and 143 miles of new streets, and their duty was, as far as possible, to see that those new streets were laid out wisely and well, and the buildings constructed in a proper manner. He knew that many of them thought that the London County Council tinkered too much with the Building Acts, and there were those who did not agree with the attempts made to amend those Acts, but he would not say more, as it was a thorny subject. The Institute, whose health he was now about to propose, was certainly the foremost Institute in the architectural world, and he was glad to see that it had received royal approval so lately as last year in the matter of its supplemental Charter, which he trusted would be a matter of satisfaction to all members of the Institute. With the toast he coupled the name of the President, Mr. Ernest George. To few men had been given the great happiness of achievement which had crowned the President's career, whether as designer, as architect, as painter-etcher, as water-colourist. Since he took the Royal Academy gold medal some fifty years ago his progress had been remarkable. With Mr. Norman Shaw and Nesfield, he recognised the unworthiness of the architecture and decoration of the early Victorian period, and by his great ability and keen appreciation of the best traditions of art he had contrived by his work to inspire the younger generation with better ideals.

Mr. Ernest George, in reply, said, "We celebrate to-day our seventy-sixth anniversary, and it is seventy-two years since under its then President, Earl de Grey, the Institute of British Architects obtained its Royal Charter. Since our gathering last year the most important incident is that His Majesty has been pleased to grant us the new or Supplemental Charter for which we applied. This enables us to make rules for the better ordering of our house, for the regulation of ourselves, and, we hope, for the benefit of the community. The said revision of the Charter and By-laws is the result of a movement that stirred, if it did not divide, our camp. Architects, especially those in the provinces, found that work which should come to them too often went to auctioneers and others who ventured to include architecture in their sphere of usefulness. In our enlightened metropolis some will get not only their groceries but architecture and decorations from the Army and Navy Stores, from their upholsterers, or from like professors of our art. This is a trouble, but it must be met by keeping our own work at a high level, and by a growing perception of what is good on the part of the public. To have all architects registered has been proposed, though this would not prevent the employment of outsiders; we should also have to admit all sorts and conditions of those in practice. We prefer to insist that in future all shall enter through the schools, obtaining their diploma or certificate which shall distinguish the architect from the quack, and we look for further legislation to accentuate the difference. The training will come gradually by a wise organisation of our training schools, bringing all into line and demanding that a standard of efficiency shall be attained for those who would enter our Guild. This will be the preparation for Associateship, and our Fellows will be chosen only from those who have passed the schools with a sound knowledge of the constructive art, thus ensuring the public against ignorance and incompetence. A Board of Examiners cannot guarantee that a man is an artist. To meet the exigencies of the hour, the Charter makes provision for a new class, to be styled "Licentiates," under which head we hope to receive into the Institute the large number of practising architects who have outgrown the days of schooling and examinations. The subject of examination has had serious consideration, and on our Educational Board professors of the Universities are working with our best men. Till of late the Institute has not been an educational body, having helped only by the awarding of prizes and travelling scholarships. A distinct advance has been made in the system of training, and our young men will start with a better equipment than their seniors enjoyed. We hope they will do better work. Students of ability are coming to the front every year and carrying away our scholarships. It would be a grand thing for these promising men, and a public gain, if some of these had an opportunity of carrying their studies further in a higher school, acquiring a knowledge of what is really great in art. A special school has been suggested for these diploma men, amongst whom a distinctive prize, a "Prix de Rome," would be awarded. We feel that Englishmen may have their School of Rome, and be under the influence of the noblest monuments, as well as Frenchmen, Germans, and Americans, who have that advantage. A British School of Rome exists, and with its members we have been conferring. It is doing admirable work. It consists of archæologists, savants, professors, and men of letters, and they cordially invite us to join them in any project we may have. Their present arrangements would not accommodate us, or meet the requirements we have formulated for our Architectural School: but an amplification of the present institution would please us better than to start a separate venture. Our Committee which has been considering this scheme will shortly have a definite proposal to bring forward. We should like to think that in time painters, sculptors, and architects will be comrades in such a school. Ways and means are always an important feature in any enterprise. We have funds which may fairly be employed in the educational scheme, which is one that may appear to generous donors who are interested in the growth of art amongst us.

Hitherto the general public has declined to know anything about architecture as a fine art. A good building has not always been appreciated nor a bad building always found out. There are indications of a growing knowledge in the matter, and of a higher criticism, and this, I am sure, will be responded to by ourselves. Buildings that may be classed under the head of architecture remain much in the minority. But if taste improves we may find even the speculator giving us honest buildings on simple lines, instead of jerrywork with meretricious ornament. As a rule the community gets what it wants; our hope is that it will learn to want the best. For the execution of work we have skilled craftsmen, and our admirably-furnished technical schools will increase knowledge and power. These schools we value most as providing evening classes for the practical mechanic; they are not a substitute for a good system of apprenticeship. There is with the schools always a danger that a boy gaining a useful training in colour, in modelling, or drawing (most helpful to him in his craft) will think that he must, with this smattering, become an art student, paint pictures, produce statues, or become an architect—thus swelling the ranks of the useless unemployed. A good mechanic is a nobler object than a bad architect. It is disturbing to think what will be the future of our many promising men who are starting with every advantage, and with a sound knowledge of their calling; there seems hardly enough work to go round. We have fallen upon bad times, and, I believe, with few exceptions, architect's offices and builder's shops are very quiet. Those who should be building houses either have not the money or are spending it on motor-cars or on old masters. We are waiting for the world to mend. Fortunately, public works and municipal works are not feeling a similar check. We are only just realising that our cities are not all that they might be. We have beautiful buildings, but they occupy positions as if by accident rather than design, for the most part hemmed in after by mean surroundings. We owe much to our Government for the Town Planning Bill, by which in time we hope to gain healthy and open spaces, dignified approaches, and the beauty that comes of a well-studied "lay-out," with architectural treatment. Changes must come by degrees to the already-crowded cities, but when new ground is broken and new suburbs are taken in hand builders will conform to some well-studied plan. We owe much to Mr. Henry Lever, our guest to-night, for his generous endowment of a school of architecture for the special study of town planning. In the interests of art we architects must be willing to sink some of our individuality for the sake of continuity and harmony, symmetry and balance. We have been too anxious on each narrow frontage to stamp our own mark. Our personal originality is not a matter of importance requiring a public memorial. A great thing is to be prepared beforehand for future developments, and we are formulating for general guidance rules that should be observed and which will generally apply to such scheming. The possibilities of our own city are being studied; while our allied societies are considering their own several cities and towns with a view to their best development; they will then be ready with advise when changes are required. The Bill of Mr. John Burns gives us the opportunity of making representations, criticisms, or suggestions before any new scheme is sanctioned, and we hope to use a helpful influence. We have made a good fight from time to time in the interest of some valued building or monument to save it from destruction or from being 'Grimthorped.' We have sometimes failed in

our immediate object, but good has been done. We have shown the honest Philistine that there is a second way of viewing things, and that to many the intrinsic beauty of a subject is a real possession that must not be carefully swept away. The æsthetic side has been too often overlooked where changes have been made for convenience and economy, when a noble conception might have been realised. Curiously, the American architects in conference have just made inquiry of us as to the British rules or regulations for securing architectural treatment or style. With regret we replied that every man is a law to himself—no regulations deal with the quality of beauty; it is not taken into account. We are thankful for the appointment of the Royal Commission for the Preservation of Ancient Monuments, which is under the chairmanship of our distinguished guest, Lord Burghclere, and on the Council of which is our Vice-President, Mr. Leonard Stokes; while Mr. Forsyth is on the Council of the National Trust for Places of Historic Interest. We have a Building Act which we are all supposed to know intimately. It was simple once, but it has become overlaid with laws till it is now as big as the catalogue of the British Museum. It is being revised and enlarged, and it proposes to spare architects responsibility for their work. It will define for us all details of construction for the insides of our steel-framed buildings as well as for the party-walls and front walls which should be under its regulation. The work of the architect's office will be transferred to the multitudinous overworked clerks of a public office, causing delays that will be disastrous to building operations. We have urged the objections to such a drastic change, and I believe our arguments will be graciously considered in Committee. Our Vice-President, Mr. Edwin T. Hall, has been indefatigable in his efforts in this cause. An Act would be simpler that defined the things that must *not* be done in building. Steps are now being taken to secure the protection of "copyright" to the works of architects equally with those of the painter, sculptor, and literary man. At the various International Conferences this has been insisted on, the British Section only showing indifference to the matter. Now, at the representation of our Institue, our Foreign Office has practically accepted the principle, and Mr. Belcher and Mr. Simpson are ably pleading for Parliamentary ratification of the Berm Convention, which included architecture with the other arts. Plagiarism and the borrowing of ideas will perhaps remain as general as at present, but our drawings and studies will be our own, as a painter's rough sketches are his own, although he may sell the picture from which they were made. The ownership will be clearly established in face of sundry legal decisions in the past. The client pays for the house we build him, and not for the processes we may employ in the making of it. A good client lately showed me with pride a group of cottages that seemed familiar, though in strange surroundings. These, he said, are copied from those you did for me on the other side of the park, and I had not the heart to tell him this was an act of piracy. The copyright for which we ask will secure to us our documents as well as other privileges of which we have doubtful possession at present. Last year we had the honour of conferring our Royal Gold Medal upon M. Honoré Daumet, who was also our guest. This year it has been decided, with His Majesty's approval, that the Medal be given to Dr. Arthur J. Evans, in recognition of his discoveries in Crete, a priceless addition to our knowledge of the past. He has devoted his life and means to the great work of exploration. Dr. Evans would be with us now, but that he is burrowing below ground in Crete. He comes to us in November to tell his story and to receive the decoration. Our Royal Institute may be reported as in a healthy and prosperous condition. Our roll of 2,300 members is larger than heretofore. We have our seventeen allied societies in the United Kingdom, three in South Africa, one in Canada, and one in Australia. We have been consulted on various matters by those in office, and we have an increasing influence, which I hope has been used for the general good."

Sir Aston Webb, R.A., Past President, then proposed the toast of "The Guests," coupled with the name of Mr. W. H. Lever, M.P. He said that they liked to think that their guests came to them because they sympathised with and appreciated the noble art which it was the pride and glory of the members to practice. No one who worked with his brains and hands could afford to ignore sympathy and appreciation, and that was what they felt they had from their guests. In Sir L. Alma-Tadema they had one of their best and oldest friends, and as to Mr. Brock, much had already been said in expression of their great admiration for his fine work in the Mall. [Sir Aston then mentioned the names of other guests, and concluded by referring to Mr. Lever.] Mr. Lever had been a large employer of architects, and anyone who had been through the Wirral district of Cheshire as he had would know that Mr. Lever had dotted that district over with beautiful homes, and that the large number of people he employed were housed in beautiful homes far superior to most employees' dwellings. Mr. Lever had also given help in a most practical way to the Liverpool University by asking the students to build three cottages for him, and he had given much help in regard to the advancement of town planning, a subject in which he was greatly interested. If he might use a motto of Mr. Lever's he might say: As long as we have men like that we may trust bricks and mortar and not worry.

Mr. Lever, in reply, said he could understand why architects invited guests on such occasions, for they did not altogether wish to be left alone with themselves: it was better to have a client or two. Cruel Fate had made him a soapmaker instead of an architect. If he had any recreations one was architecture and building, and he had sometimes felt how much nicer it would have been if he had been the architect and his architects the clients; he should then have had the pleasure, as he knew they had—a pleasure which he as client only shared to some extent—of planning beautiful buildings and seeing them executed. But Fate had decreed otherwise, and he had to submit. He had an arrangement with all architects who worked for him, and the result was he had yet to have his first quarrel with any; the arrangement was that faults in regard to any architectural work he was connected with were to be put down to the client and any work that could be admired was to be ascribed to the architect. There were the Seven Lamps of Architecture, and he often thought there were three building ages for the architect. There was, first, the age when the architect imagined all the beautiful buildings he would design and superintend the erection of when he was a man—the cathedrals and town halls, etc.; that was the age of innocence. Then there was the age when he erected the buildings entrusted to him; that was, the prime of life. Then there came the age when he was sorry, more or less, for all the work he had done, and that was dotage. He was convinced that the more worthy an architect was the more advanced he was in his profession, the more certain it was that he would go through these three ages. He would be filled with ideals when he was young, he would find in the prime of life how difficult it was to realise them—that he had always a client who sometimes, which from the architect's point of view ought not to be thought of at all, insisted upon the fact that a building was an investment on which there had to be a money return. That was a little point which gave rise to much irritation and annoyance, and which resulted in so many buildings being cut down from what they would have been but for this necessity. Such matters were of importance, and if attention were not given to them there would be no solvent clients left. There was the disagreeable practice of going into accounts, and the exact cost of a building. These were some of the difficulties which existed to-day which he did not believe existed in past times to any large extent; but the modern conditions had to be faced and work done to the best of one's ability under those disadvantageous conditions. In looking at the cost of building, say 300 years ago, he found that a building that now cost, say 18,000*l.* or 19,000*l.*, might then cost about 8*l.* or 9*l.*, and that was explained in this way: the building-owner only paid for the right to get timber and material and could use the labour from his estate free, and the cost was apparently kept very low. A parallel of that sort of thing could be found, to some extent, if the London County Council turned its employees upon the erection of its new Hall without charging the cost of this labour; or the great railway companies did the same on the works they executed. That was how seemingly cheap buildings were erected in those days when there was such a lavish use of oak and so on. The labour cost nothing, or, rather, was not always charged against the building. Those days were gone, and the problem to-day was how to get really beautiful buildings without the necessity for having rich clients. He had always sympathised to a certain extent with the jerry-builder, for he felt he was more sinned against than sinning. His clients' tastes were not elevated, and he built what he had found a certain class of people wanted at a rent they could afford to pay; a little parlour, a little porch, and so on. If the jerry-builder went to an architect he would find that the architect, rightly and properly, refused to do anything but good work, and would not produce cheap plans that would violate the traditions of good art. The jerry-builder was, therefore, thrown back on plans he made in his office and which suited his particular clients. Could not something be done in the matter? Mr. Edison some time ago made a surprising proposal for about the lowest form of building—something about moulds in which cement had to be squirted; and how such a suggestion came from a man like Mr. Edison he could not think. The initial cost for moulds would have to be so great that unless an enormous number of houses from one mould were turned out the attempt to greatly cheapen would be a failure on that ground alone. But between such a form of building and the beautiful Elizabethan cottages, with their charming doorways and windows and so on, there was a great gap. Was it not worth while for architects to try and get some form of building which would be beautiful, adapted to the need of the time, built with material available in our time—material not available 100 years ago, and which would supply warmth in winter and coolness in summer, and be at all times an ideal home within the means of the people who had to inhabit them? We should think of the people crowding together into one-roomed dwellings while there were thousands of costly houses empty just because people had not the means to live in them. He believed that we in our day and generation would not be living up to the standard fixed for us—fixed by those who went before us—if we did not devote ourselves to considering the material available at our hands to-day and the cheapest form in which we could adapt it to our needs, without vulgar monotony. Whilst we were taking our examples and finding our best illustrations of what we wanted to produce from buildings erected centuries ago, we were, perhaps, neglecting the means at our hands to-day. In the case of the clothes we wear, modern appliances and machinery had given us cloth infinitely better and cheaper than cloth ever was at the time the architectural master-

pieces were erected, because advantage had been taken of the machinery and materials now available. And there was no monotony in our clothes; nay, there was greater variety than ever our forefathers had. He thought we ought to be able to get beauty without elaborate detail; for beauty depended more on form than on elaboration, and more on proper construction than on ornament. We could have, and we ought to have, great beauty produced under modern conditions without monotony—with infinitely greater variety than was ever possible before, by availing ourselves of what modern science and art placed at the disposal of architects to-day to enable them to solve this great problem. We were now dragging along, and our suburbs were made ugly by the style of houses put up. There was to-day no escape from costliness, except by monotonous ugliness, as anyone who experimented would find, that a departure from the present system of thin walls, and ugly houses, meant buildings which could not be put upon a commercial basis, and were, therefore, out of the reach of the investment-builder. There was no profession he had more to do with than the architectural profession, and none in which he had greater interest. No profession occupied a more honourable place in the life of England to-day or could do more for our homes in the future. In conclusion, he had the honour to propose the health of the President. He made Mr. George's acquaintance many years ago, and he had always been a great admirer of his work, for Mr. George had done much to solve that difficult problem of making a home that was really a home beautiful in all its parts, and yet convenient for modern usages without degenerating into the appearance of town halls or public institutions such as workhouses, as was so often the case. Mr. George had realised the ideals of the English home—beautiful in every way, and they had reason to be proud of their President, as he had reason to be proud that at Port Sunlight they had some beautiful examples of his work.

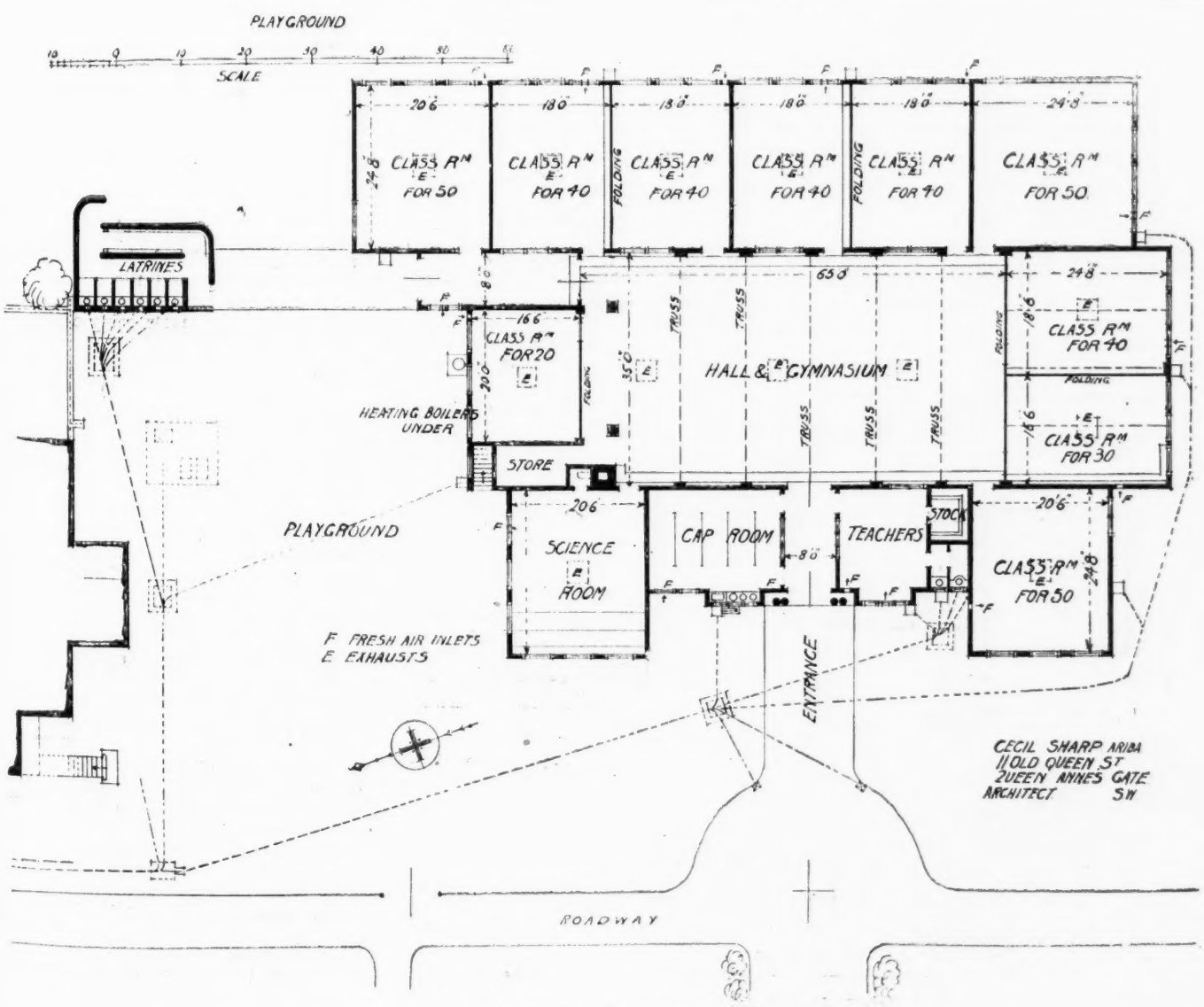
Mr. George briefly replied, and the proceedings terminated at twelve midnight.

A NEW EXPERIMENT IN SCHOOL-BUILDING.

THE North Surrey District School, Anerley, is a school of the elementary class for 400 boys, and has been erected for the managers of the North Surrey District Schools at Anerley in Surrey. The instructions given me by the managers were for a school-building of a temporary character but to be practically permanent, to have all modern improvements found in recently-erected school-buildings, and to be erected in the shortest possible period of time, and to be as cheap as possible. It will thus be gathered that I had a somewhat difficult problem to solve, but after due consideration of all points affected, with the aid of the specialist, I have been able to produce a building of a temporary character and yet quite permanent. It is temporary only so far as regards the use of materials in relation to the Local Government By-laws, it is cheap and yet the quality is good, it is sound and was erected in twelve weeks.

To enable the building in question to be erected a special license had to be obtained, which license has to be renewed periodically. The by-laws will only allow this building to be called a temporary one, but the only reason for this seems to be the fact that the external and internal walls are not of sufficient thickness to comply with such by-laws. The strength of the walls is ample and equal to any strain liable to be put upon them; they are absolutely sound and rigid, weather-proof, and will counteract all thrusts, but because they are not built of certain thicknesses in relation to their length and height the by-laws will not allow of such walls. By-laws are undoubtedly out of date and must be revised if steel and concrete buildings are to be used in this country, and so allow walls of less thickness being used without projecting footings and so forth. There has been a great deal of discussion and experiments made of late years to see if workmen's cottages cannot be erected so cheaply that a reasonable rental may be demanded to show a proper return in interest to the owner. I think this cannot be done so long as the by-laws stand as they are and if it can be proved that a good, substantial and cheap cottage can be erected by some means to give the above results, I then think facilities should be given the architect to design a cottage or buildings in accordance therewith and still retain an architectural design in their conception.

The site of the building under discussion has an elevated situation and has adjacent sewers, gas and water mains. The soil is a stiff clay upon the surface, and the area of the site has a fall of about 3 ft. to the south-west. The entire area was dug over and a spit removed and brought up to a level with hard core upon which was placed a platform of ballast and cement-concrete 6 in. thick, with 2 ft. thick under the stanchions carrying the roof trusses. No footings or damp course were necessary. Pipe-trenches were formed in the concrete for all hot water warming and gas-pipes, the former converging to the boiler in the heater-room in a basement, this latter being built of 9 in. and 4½ in. brick walls with a 2 in. space and having a damp sheeting of thick slates

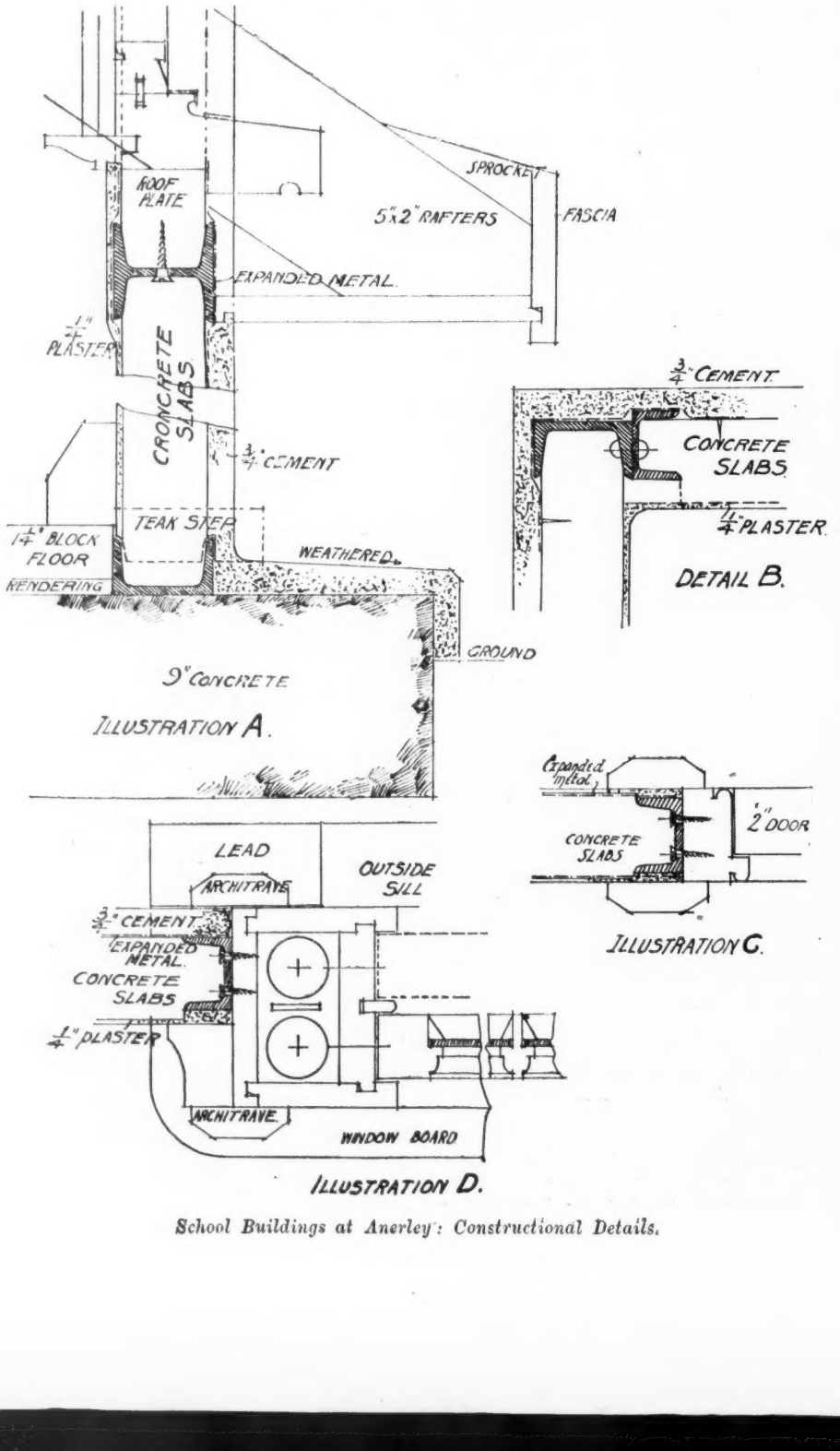


School Buildings at Anerley. Plan.

North Surrey District Schools, Anerley. Mr. Cecil A. Sharp, A.R.I.B.A., Architect.

bedded in cement upon the outside of the walls.

The building of the school-hall and all surrounding class-rooms, etc., was first commenced and completed in a steel frame construction of very slight scantlings, and the roof-trusses likewise in steel fixed. This framing consisted of a channel sole-piece, as shown in the illustration A, laid upon the concrete platform previously mentioned, thus giving an outline plan in steel of the building. Upon this was erected the angle frames shown in detail B, and having intermediate framing where required for all trimmings for the openings of doors and windows, as illustrations C and D, all being bolted, angle-cleated and plated at the junctions as necessity required. To carry the main-roof trusses over the hall stanchions were erected with angle plate seatings embeddied in the concrete blocks, and from these stanchions were spanned across the hall trussed steel curved ribbed girders to carry the roofing, having angle-cleats for purlins and plates and ceiling-joists, the latter to form a curved ceiling.



School Buildings at Anerley: Constructional Details.

To form the walls of the building externally and internally a special concrete slab was formed of a dovetailed character, each slab fitting one into the other, and being about 1 ft. 9 in. by 1 ft. 5 in. by 2½ in. thick, and not too heavy for a man to handle comfortably. They have a V grooved at the edges into which is forced and grouted cement and sand, as the blocks or slabs are built into position. They form a true surface and excellent key for the plastering and external cement rendering, and the steel-framing is of such a detail throughout that the slabs fit into same, the latter being easily cut, as required, for odd lengths, etc. Upon the inside of the walls, so constructed to cover all steel framing, expanded metal is fixed, the entire surface of the walls and ceilings internally being finished with marble plaster, and the external walls finished with cement rendering ¾ in. thick (2 and 1) and roughed over with a stiff brush. The work as finished has the appearance of brick-built structure rough cast upon the outside, and becomes, one might say, a monolith. It is absolutely rigid and of a most substantial character and perfectly weather-proof, no joints for access of rains and damp and upon which frosts might act adversely to the substantial character of the building are visible.

The joinery, such as window and door-frames and skirtings was all properly considered as to their detail for the special cases they had to answer. It will be seen from the details of the construction, as illustrated, that the frames were screwed to the steel-work before the partition slabs were put into position, and no fixing blocks or pads or plugs in the walls are necessary, as an excellent fixing is obtained direct to the slabs themselves.

The entire building was erected in a remarkably short space of time, only taking, from commencement to finish of all walls, steel-work, plastering, joinery, roofs covered, drains and erection of the brick-built latrines, fifteen weeks. The steel-work was completed in six weeks, the walls in three

weeks, and the plastering and cement-rendering completed in four weeks. The entire work goes on simultaneously; the joinery is fixed to the steel-work as soon as the latter is in position, and the roofs were being covered in and slated whilst the steel-framing was in course of erection. The thickness of the walls is only 3½ in. finished, including the plaster and external cement-rendering; and experience gives proof of the excellent weathering qualities of such walling. The walls are as sound proof as ordinary 9 in. brick-walls, and as rigid. The strength and rigidity of these walls are remarkable considering their thinness. The roofs were boarded and slated with green slates.

Efficient natural ventilation is provided, there being properly disposed inlet and outlet ventilators in walls and ceilings, and the radiators for artificial heating are of the fresh, warm-air type.

The classrooms (eleven in all) have barrel ceilings, as also the hall; ten of the classrooms open direct out of the hall and two of the classrooms at one end of the hall and one classroom at the other end have been so arranged with moveable sliding and folding partitions that these classrooms may be at once thrown into the area of the hall for entertainments, etc., thus making a hall 107 ft. 6 in. long and 35 ft. wide, which at ordinary times would be 65 ft. by 35 ft.

Buildings of this character can be erected at less than two-thirds the cost of a similar building in brickwork, and would be practically fireproof.

If the Local Government Board could be persuaded to relax somewhat their demands or stipulations for certain thicknesses of walls and make the clauses affecting this of a more open or elastic character, then there is not the least reason why workmen's dwellings, cottages, factories, school-buildings, farms—in fact, nearly every class of building erected in urban or rural districts should not be of this character. I consider that a workman's cottage of eight rooms can be erected for 130*l.*, which means the tenant would pay a rental within his means and the landlord would reap a good percentage for his outlay, and the land would be more widely populated, outlying districts would become populated and land values improved. Practically the only clauses of the Local Government by-laws which stand in the way seriously of the construction of buildings in the matter of the one here described are the stipulations that no wall shall be of a less thickness than as stated, having relation to its length and height. This was all very well before the advent of concrete and steel-construction, now brought to such perfection, and which system has come to stay. Model by-laws, as well as the London Building Act, will have to be considerably altered, there is no doubt, to enable steel and concrete constructions to be erected in an economical manner. At the present time steel construction in walls if used is practically a dead loss, as the walls have to be built up independently of the steel in brick or other suitable similar material to comply with the thicknesses of walls as stated in the by-laws and Building Act, without taking into account the steel-factor at all. This not only causes a serious loss to building owners, but to the building trade generally, and the country at large, as it affects progress and, consequently, prosperity.

The cost of the school-building described in this article was small in comparison with its size, and, as before stated, this cost can still be greatly reduced.

The following contractors were engaged to carry out the work:—

Building contract: Messrs. F. & G. Foster, Norwood Junction. Steel-work and concrete slab-walling: Messrs. Smith, Walker & Co., Tothill-street, S.W. Heating and engineering generally: Messrs. J. Jeffrey's & Co., Old Queen-street, S.W. Window-opening gear and ironmongery generally: Messrs. R. Adams & Co., Emerald-street, W.C.; Gas-lighting by intensified system: Messrs. Keith, Blackman, & Co., Farringdon-street, E.C. Sanitary-fittings: Messrs. Adamsey, Ltd., Old Queen-street, S.W.

CECIL A. SHARP,
Architect to the School Managers.

NOTES FROM FRANCE.

THE Jury of Architecture at the Paris Salon has not awarded the "Medal of Honour" in Architecture this year, though they have awarded a Medal of the First Class to M. Tony Garnier for his plans for an abattoir and cattle-market at Lyons. Medals of the Second Class have been awarded to MM. Formigé, Danis, Thiers, and Marcel Magne.

In the course of operations connected with the making of a new street between the Pont Neuf and the Church of St. Germain des Prés at Paris, there has been discovered, in the courtyard of a house in the Rue Guénégand, a tower which formed part of the city wall of Philippe Auguste. The "Vieux Paris" Committee have passed a resolution demanding that this relic of the ancient city should be carefully preserved, and should not be sacrificed to the street scheme.

A monument to Bossuet has just been completed at the Cathedral of Dijon. The statue of the great preacher, modelled by M. Paul Gasq, stands on a semicircular base of red Brochon stone. It is accompanied by an allegorical group in bronze by M. Matharin-Moreau, and a shield with the arms of the prelate. The architectural part of the monument has been carried out by M. Charles Suisse, formerly Architecte-en-Chef to the "Commission des Monuments Historiques," and the decorative carving is by M. Xavier Schanosky.

French decorative art has sustained a great loss in the sudden and unexpected death of M. Guillaume Dubufe, which took place on board the steamer on which he had sailed for Buenos Ayres, where he was to organise an art exhibition. M. Dubufe, who was the pupil of his father Edouard Dubufe and of Mazerolle, had devoted himself almost exclusively to decorative painting in connexion with architecture. Among his works of this class are the two great pictures called "La Musique Sacrée" and "La Musique Profane," painted in 1882 and 1888; the decoration of the foyer of the Comédie Française, and that of the Galerie des Tourelles at the Paris Hôtel de Ville. He also took part in the decoration of the new Sorbonne, and of the Palais de l'Elysée; and was the author also of a grand composition representing the apotheosis of Puvis de Chavannes. M. Dubufe had obtained a gold medal and the Cross of the Legion of Honour at the 1889 Exhibition. Latterly he had acted as organiser of the exhibitions of the New Salon. He was also an able writer and critic. It is only a few days since that we were admiring a fine decorative painting by him in the New Salon, in which ships form the principal subject, and which is intended for the grand staircase of the Mairie of Saint-Mandé, on the outskirts of Paris. He was 56 at the time of his death.

THE ARCHITECTS' TECHNICAL BUREAU.

THE half-yearly report is being forwarded to the architect subscribers this week. Explanatory information is given on one or two points as to the services of the Bureau that are not quite clear to some of the subscribers. There are in all eight different departments of the Bureau, and those who subscribe should make themselves thoroughly acquainted with the services of each, so as to derive the full benefit from their annual subscription.

A new department was opened at the commencement of this year, viz., that of approving various manufacturers' specialities. The present method of inundating architects with circulars is highly unsatisfactory both from the architects' and the manufacturers' standpoint, since the majority are not seriously considered, and any idea of keeping them for future reference is rendered exceeding difficult owing to their number and varied shapes and forms.

Goods of merit are in this way passed over, and few manufacturers have the opportunity of personally explaining their advantages; also many circulars are unintentionally misleading owing to a too natural inclination on the part of the producer to say too much for the merits of his goods, and discrimination is greatly handicapped by the absence of the actual article before the architect.

Bearing these points in mind, the system has been adopted by the Bureau of submitting goods, together with their description, to a selection committee of architects, and providing standardised circulars and classified folios for their reception. Subscribers are thereby enabled to keep *au courant* with all the recent and improved fitments, and particulars of which are thus received in a convenient form that can be available for future reference.

New Offices.

The work of the Bureau having considerably developed has necessitated an increase in the staff, and also removing into more spacious offices at 24, Hart-street, Bloomsbury.

Competitions.

Particulars of the following competitions can be obtained from the offices, the reports having been compiled from data, and other information obtained by visiting the respective sites.

	READING.	GRIMSBY.	STOKE-ON-TRENT.
Subscribers	8s. 0d.	15s.	6s.
Non-subscribers	10s. 6d.	18s.	8s.

Architectural Societies.

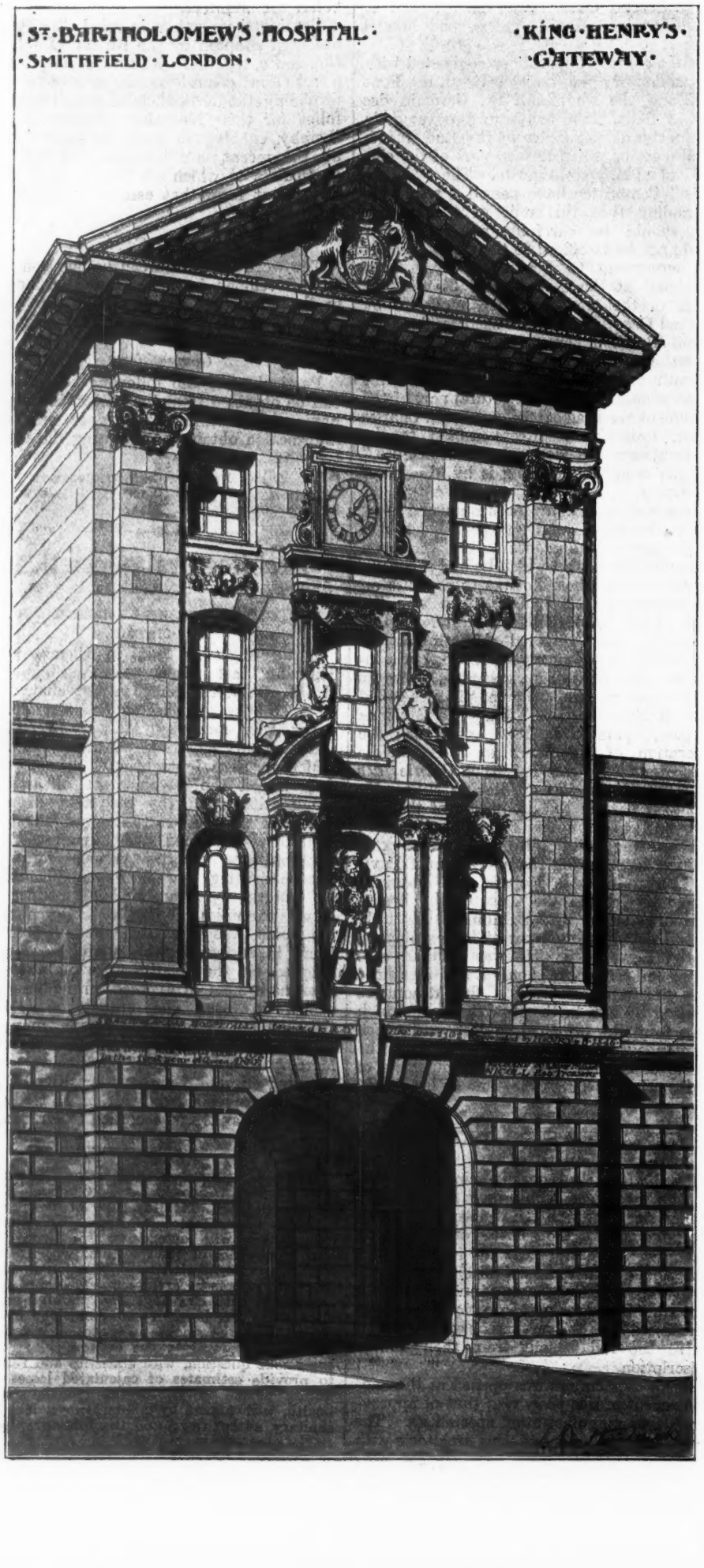
THE GLOUCESTERSHIRE ARCHITECTURAL ASSOCIATION.

A meeting was held in Gloucester on Thursday last week, the President (Mr. H. W. Chatters) being in the chair. Mr. S. A. Brooks was elected an associate. A paper was read by Mr. W. J. Bache (Cheltenham Electrical Engineer) entitled "Modern Electric Lighting." The lecturer first traced the development of artificial illumination from the rush-light of early mediæval days down to the present time, and then explained the advantages and disadvantages of the various forms of electric lighting now in vogue, illustrating his remarks by means of lantern-slides and actual examples. For the latter purpose the room was specially wired, a portion being in surface flexible wiring so largely adopted on the Continent, while the new Siemens system of exposed wiring was also shown in use. The current was then switched on to numerous lamps, many of the most recent type, one 600-candle-power Mercury Vapour lamp producing some startling effects. On the proposition of Mr. G. P. Milnes, seconded by Mr. M. H. Medland, a vote of thanks was accorded to Mr. Bache.

NATIONAL SMOKE CONFERENCE, CHICAGO.—The American Society of Mechanical Engineers will hold, in May-June of next year, a Smoke Conference in Chicago. The general programme will extend to the legal and æsthetical sides of the question, with full information upon restrictive legislation in force, and with papers by architects and others, to be illustrated with drawings and photographs to show what has been or could be done by the abolition of the smoke nuisance; experiments in smoke abatement; the economical side of the smoke question, with statistics and returns to provide estimates of calculated losses and gains; smoke in its relation to the public health, with papers by eminent physicians and sanitary authorities; and the bibliography of smoke abatement.

KING HENRY VIII.'S GATEWAY, ST. BARTHOLOMEW'S HOSPITAL.

THE principal gate of St. Bartholomew's Hospital bears the name of Henry VIII., who, after the suppression of Rahere's adjacent priory (*temp.* Henry I.), refounded Rahere's Hospital, at the instance of Sir Richard Gresham, and endowed it out of its former possessions to the extent of 500 marks a year, the Corporation of the City agreeing by an Act of Common Council of April 13, 1546, to contribute, as they still do, a like amount per annum. The hospital buildings were reconstructed for 100 beds in 1552; in 1729-48, with the aid of public subscriptions, Dr. Radcliffe being a generous contributor, the two courts were rebuilt by James Gibbs, who used Bath stone for the ashlar of the four detached blocks about the big quadrangle, measuring 200 ft. by 165 ft.—the first instance, it is said, of the adoption of Bath stone for a large edifice in London. P. Hardwick, R.A., repaired and encased the four blocks in 1842.



The gateway, having a statue of King Henry VIII. in the niche and figures of Sickness (right) and Lameness (left) on the lower pediment, was built in 1702, after a design which has been attributed to Wren. The elevation presents some similarity to Wren's Middle Temple gateway and his façade of Drury Lane Theatre. But by the courtesy of Mr. Thomas Hayes, Clerk to the Governors, we are enabled to cite the following extract, dated May 5, 1701, from the hospital books:—

> It is this day agreed with Edward Strong, junior, mason, to erect and build the front of this hospitall's North Gate in Smithfield with pirblock stone according to the modell drawn by the said Edward Strong and approved of by the Governours appointed Viewers of the Revenues of this Hospitall for the sum of five hundred and fifty pounds.

Edward Strong the younger, son of Thomas Strong, did much work for Wren at St. Paul's and many of the City churches; he died in 1741. The three-quarters length portrait, lettered "Anno Dni 1544 Ætatis Suæ 55" of King Henry VIII. in the hospital committee-room is ascribed to Holbein. Alfune, who *teste* one of the Cottonian MSS., "Vespasian," ix., had founded St. Giles's Hospital, Cripplegate, was by one account first master of the St. Bartholomew's Hospital, in the establishment of which he shared with his friend Rahere.

IMPACT TESTS OF "KLEINE" FLOORING AT OLYMPIA.

BEFORE demolishing their pavilion at the recent Building Trades Exhibition the Kleine Patent Fire-Resisting Flooring Syndicate conducted a demonstration with the object of showing the effect of loads falling from a height upon their floor, which, as our readers are aware, consists of hollow brick with cement mortar joints reinforced by steel tension bands.

At the time of the tests the floor had only attained the age of twenty days. Consequently its strength was far below that obtaining in permanent construction after the lapse of adequate time for the setting of the cement.

The floor in question measured 20 ft. by 12 ft. between the supporting steel girders, and was not calculated for a heavy superload. The object of the tests was not to ascertain the breaking load of the construction, but merely to demonstrate its resistance to impact.

The first test was conducted by dropping a piece of stone weighing 90 lb. from the height of 12 ft. upon the centre of the floor. After eight repeated falls upon the same spot, about 15 in. square, a hole was knocked through the brick and mortar, but the stone remained suspended on the reinforcing bands.

The second test was conducted by dropping a round shot weighing 30 lb. from the height of 18 ft. upon another part of the floor, the effect being very similar to that caused by the falling stone.

Examination showed that no portion of the floor was damaged except the small areas upon which the weights had been dropped, the cohesion of the reinforced cement mortar joints being particularly noticeable.

In order to demonstrate the absence of lateral thrust against the supporting steel girders, a glass measuring tube was placed between the floor and an upright timber post arranged so that a very small pressure against the steelwork would break the tube. As the glass remained intact this auxiliary test must be regarded as quite satisfactory.

For the purpose of gauging the rigidity of the construction under shock an ordinary egg was placed on the floor near the point upon which the stone was dropped, so that any appreciable vibration would crack the shell. This test also proved satisfactory.

THE CONCRETE INSTITUTE.—Our report of the last meeting of the Concrete Institute is unavoidably held over until next week.

THE BRITISH FIRE PREVENTION COMMITTEE.

On the occasion of the tenth anniversary of incorporation of the British Fire Prevention Committee, a dinner was held on the 25th ult., in the Georgian Hall, Gaiety Restaurant, W.C., Mr. Edwin O. Sachs, Chairman, presiding. There were also present:—The Rt. Hon. the Earl of Londesborough, K.C.V.O.; the Hon. Sir J. Cockburn, K.C.M.G., M.D., late Premier of South Australia; Sir Henry Tanner, Kt., I.S.O.; Sir Thomas Brooke-Hitching; Sir J. Williamson, Kt., C.B.; Sir J. Weeks Szlumper, Kt.; His Honour Judge Rentoul, K.C., LL.D.; Captain J. de Courcy Hamilton, London Fire Brigade; Lieut.-Colonel Fox, London Salvage Corps; Lieut.-Colonel Seabroke, V.D., Chairman, National Fire Brigades Union; Major A. McN. Cooper-Key, H.M. Chief Inspector of Explosives (Home Office); Colonel Bagnold, R.E.; Major Crozier, Chief Officer Reichel, Berlin Royal Police Fire Brigade; Chief Officer J. Meier, President, International Fire Service Council; Chief Officer Westphalen, Vice-President, International Fire Service Council; Chief Officer de Marie, General Hon. Secretary, International Fire Service Council; G. E. Bond, J.P., President, Society of Architects; and Messrs.:—

R. A. S. Redmayne, M.Sc., M.Inst.C.E.
J. Brandon, L.C.C.
George R. Sims
Sidney Gamble, F.S.I., A.M.Inst.C.E.
F. R. Farrow, F.R.I.B.A.
F. E. Wentworth-Sheilds, M.Inst.C.E.
C. H. Colson, M.Inst.C.E.
A. Ross, M.Inst.C.E.
W. T. Hatch, M.Inst.C.E.
C. Ernest Good, A.Inst.E.E.
F. W. Hamilton, A.R.I.B.A.
F. Hammond, F.R.I.B.A.
Max Clarke, F.R.I.B.A.
E. J. Gosling, F.R.I.B.A.
Matt Garbutt, F.R.I.B.A.
A. G. Morrice, A.R.I.B.A.
P. E. Ridley, F.S.I.
B. Chatterton, A.M.Inst.C.E.
Percy Collins, J.P.
J. Randall, A.M.Inst.C.E.
O. C. Wylson, F.R.I.B.A.
E. R. Hewitt, A.R.I.B.A.
R. Mond, M.A.
H. K. G. Bamber, F.C.S.
W. Woodward, F.R.I.B.A.
Ellis Marsland, Gen. Hon. Sec., and others.

The loyal toasts having been proposed by the Chairman, and honoured,

The Rt. Hon. the Earl of Londesborough, K.C.V.O., President of the National Fire Brigades Unions' Widows and Orphans Fund, proposed the toast of "The British Fire Prevention Committee," coupled with the name of the Chairman, Mr. Sachs. He said that the Committee was formed after the great Cripplegate fire in 1897, and it was incorporated in 1899, and during its existence it had done most splendid service, notably in helping to inaugurate the International Fire Brigade Congress, which was held at Earl's Court in 1903, and also in its work in connexion with testing materials. The tests were eminently practical, and the reports were not merely the opinions of members of the Committee, but a simple statement of fact, so that anyone who took the trouble to read the reports could at once see the value or demerits of whatever material or invention had been tested. When he went to the tests he often wished it were possible for the general public to be present sometimes so as to get them to take an intelligent interest in fire prevention, for they certainly did not now. Fire prevention was really a most scientific kind of work. It was greatly to the credit of those who formed the British Fire Prevention Committee that their work was entirely honorary; they did not receive a farthing pay for any of the hard duties they performed, very often under very trying conditions; these gentlemen were giving their time gratuitously to this work.

Mr. Sachs, in reply, said amongst many letters and telegrams he had received in reference to their anniversary, he had much pleasure in stating that he had had a telegram from Mr. Herbert Gladstone, the Home Secretary, wishing them every success. The work the Committee did was very much appreciated at home and abroad, and this work was the result to a large extent of co-operation. Their testing station at St. John's-wood was, he said, the finest in the world, and in ten years they had spent 23,000*l.* in furthering their objects. Their reports on materials, etc., were liked because they did not contain opinions, but facts expressed without fear or favour—sometimes with the result that they made enemies. The modern fireman thought of fire prevention as well as fire extinction, and much of their work in the future must be aimed at reducing loss of life by calling attention to the trivial precautions which would do so much in that direction. Firemen did not like bad walls, or unprotected girders, and they were pleased to see the efforts made by architects and engineers to provide better construction and workmanship, so that fires would not spread so easily. What was now wanted was to teach the public how to prevent fires—to popularise the methods of fire prevention. The Committee made an effort in that direction some time ago and they offered prizes for fables, to be printed in children's standard readers, telling children of five or six years of age some of the dangers of fire, etc. Essays came from all parts of the Empire, and five or six of the fables were published, but the Board of Education had not seen fit to use them, though, he was glad to say, the people of New Zealand had printed them in the school primers. He thought their work on the technical side had been successful, and now they hoped to take up the popular side with the same success. The Chairman then referred to the work performed by some members of the Committee. They had reduced the loss of property from 17,000,000*l.* per annum to 12,000,000*l.*, and they must endeavour to attain an equal measure of success in teaching the public some of the safeguards which were so often neglected. As examples, he instanced the dangers of throwing down lighted matches, women wearing celluloid combs, and children flannelette clothes.

The Hon. John Cockburn, K.C.M.G., proposed the toast of "The International Fire Service," coupled with the names of Chief Officers Meier and Reichel, both of whom replied.

Other toasts were:—"The British Fire Service," proposed by His Honour Judge Rentoul, K.C., and responded to by Captain J. de Courcy Hamilton (who gave an account of the history of the British Fire Service) and Lieut.-Colonel Seabroke, V.D.: and "Our Visitors," proposed by Mr. Percy Collins, J.P., and acknowledged by Sir T. H. Brooke-Hitching, Kt., Mr. G. R. Sims, and Chief Officer Westphalen.

During the evening there was a display of lantern slides from photographs and cinematograph views taken at fires, fire tests, etc., and arranged by Mr. Ellis Marsland, General Hon. Secretary.

THE SURVEYORS' INSTITUTION AND LAND TAXATION.

The Council of the Surveyors' Institution have issued a very moderately-worded but exceedingly instructive Memorandum relating to the Budget proposals for the taxation of land. At the time this Memorandum was drawn up the Finance Bill had not been issued, and the Memorandum, therefore, only refers to the Budget Resolutions; but we can unhesitatingly say that the criticisms contained in the Memorandum will only apply with greater force to the very involved and wholly impracticable provisions of the Bill relating to the taxation of land. Some of the objections set forth in the Memorandum to this extraordinary departure on the part of the Government were taken in our leading article which appeared on May 22, but we commend to the attention of our readers this exceedingly well-drawn and carefully-thought-out Memorandum. The idea that the scheme of taxation proposed by the Budget will only touch the rich and affluent is totally erroneous; increased charges on land will cause all classes of rents to be raised, and the attempt to create a demand for land by increased taxation is an absurdity. The Memorandum shows very clearly how the Budget proposals will check the development of land and injuriously affect the interests of landowners, holders of building leases, and tenants, and the injustice that will be done to all connected with the land and the building industry should this measure ever become law.

The reversion tax will also, as is explained in the Memorandum, seriously affect the investor, and especially the investor of the smaller class, and the building and land societies. The effects of the undeveloped land tax, especially in suburban areas, and the tax on ungotten minerals are illustrated by concrete examples shown to the Council. It is to be hoped now that the Finance Bill has been issued that the Council of the Surveyors' Institution will direct public attention to the extraordinary provisions as to the methods to be applied in valuations.

All the schemes supposed to be favoured by the present Government, the housing of the working classes, the encouragement of landlords in offering improved dwellings at reasonable rents, and the inducement of the population to return to rural districts are likely to be permanently crippled by a measure which has nothing to recommend it and which is so ill-thought-out and designed that it must prove wholly unworkable.

Engineering Societies.

THE JUNIOR INSTITUTION OF ENGINEERS.

At a recent meeting of this Institution, the Chairman, Mr. Frank R. Durham, Assoc.M.Inst.C.E., presiding, a paper on "The Construction of Coin-freed Mechanisms as Applied to Gas-meters" was read by Mr. T. S. F. Gibson, Assoc.M.Inst.C.E., member of the Institution, superintendent of the Old Kent-road works of the South Metropolitan Gas Company. The origin and effects of the applications of coin-freed mechanisms were first briefly reviewed, and as showing the prolific industry of inventors on the subject the author incidentally mentioned that no fewer than 320 patents had been registered previously to 1907. Read in sequence, these documents revealed the nature of the troubles met with as the use of the apparatus had developed. The essentials of a good machine were shown to be simplicity, strength, accuracy, and compactness, and features in its design and construction were pointed out as applicable to meters of both the wet and dry types. Many slot meters had been put on the market in which the flow of gas had to be stopped by holding the meter registration mechanism and relying on the meter-valves for tightness, but this was not desirable, as it tended to strain the meter as a measuring instrument. The author dwelt upon the necessity of guarding against fraud, and proceeded to describe in detail the various coin-freed mechanisms employed by gas undertakings, in illustration of which a fine collection of examples which had been lent by Mr. Charles Carpenter, M.Inst.C.E., Chairman of the South Metropolitan Gas Company, was exhibited and their construction explained. A discussion followed the reading of the paper, in which Messrs. Walter Fendick, C. G. Evans, W. Ballantyne, N. S. Trustrum, C. H. Smith, A. W. Marshall, Sidney V. Cooke, and J. Wylie Nisbet took part.

University College.—The authorities of University College are about to carry out alterations and enlargements, which are estimated to cost about 20,521*l.* The removal of University College school from Gower-street set free for university purposes the whole of the south wing. It has been necessary to make considerable alterations in this wing in order to adapt it for university purposes. At the same time an additional wing is being erected for a laboratory, and it is intended that this new building shall be further extended by the erection of an additional wing, which will make the college buildings more completely adapted for their future work.

THE BUILDER

JUNE 5, 1909.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TERMS OF SUBSCRIPTION.

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MEETINGS.

SATURDAY, JUNE 5.

Architectural Association.—Athletic Club Sports, Stamford Bridge. 2 p.m.

Edinburgh Architectural Association.—Visit to Glasgow, under the auspices of the Glasgow Institute of Architects.

MONDAY, JUNE 7.

Royal Institute of British Architects.—Business meeting. Annual elections. 8 p.m.

Society of Engineers.—Mr. W. E. Haldwell, B.A., on "The Sinlumkaba (Burma) Ferro-Concrete Bridge." 7.30 p.m.

THURSDAY, JUNE 10.

The Royal Institute.—Professor W. E. Dalby, M.A., B.Sc., on "A Modern Railway Problem: Steam *v.* Electricity."—II. 3 p.m.

JUNE 10-12.

The Association of Water Engineers.—Fourteenth annual general meeting at Durham, under the Presidency of Mr. Robert Askwith, M.Inst.C.E., Engineer of the Weardale and Consett Water Company. The following papers have been promised for reading and discussion, viz.:—(1) "Steam-driven Pumping Plant for Deep Wells and Boreholes," by Mr. Alfred Towler, M.I.Mech.E. (2) "Working Results of Pumping Engines Operated by Producer-Gas," by Mr. D. Hastings Irwin, M.I.Mech.E. (3) "The Selby New Waterworks," by Mr. Percy Griffith, M.Inst C.E., and Mr. Bruce McGregor Gray, Assoc.M.Inst.C.E. (4) "Public Water Supply for Fire Extinguishing," by Mr. C. W. S. Oldham, Borough Water Engineer, Ipswich. (Also visit to Works; and on the 10th inst. fourteenth annual dinner.)

SATURDAY, JUNE 12.

Northern Architectural Association.—Visit to Chester-le-Street and Lumley.

Junior Institution of Engineers.—Visit to the works of the Menpes Printing Company, Watford. 3 p.m.

Illustrations.

PULPIT AT MESSINA CATHEDRAL.

THIS pulpit was the work of Antonio Gagini, a sculptor of Palermo, who had a large practice in Messina in the earlier XVIth century. It was in two solid blocks of marble, of which the upper was the rostrum, and the lower the shaft.

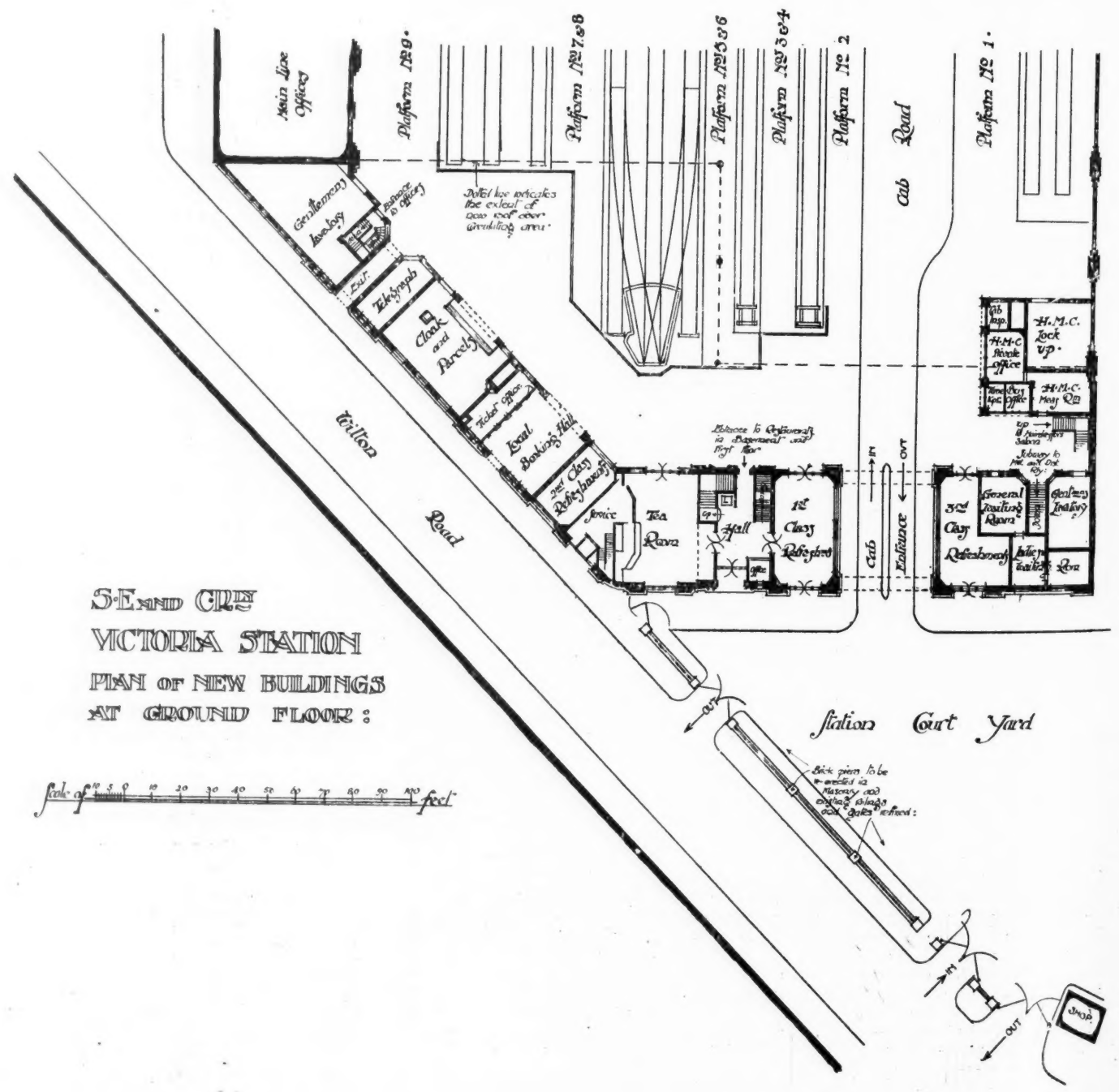
This latter was a column of unusual shape, with a kind of Ionic capital; and the further adornment of four classic masks of great beauty. The rostrum was octagonal in plan, and had on the face of each panel a finely carved figure of an apostle.

All this is unfortunately in the past now, as the pulpit was doubtless destroyed with so much else during the calamitous earthquake of January last. A. C. C.

FAÇADE TO VICTORIA STATION: SOUTH EASTERN AND CHATHAM RAILWAY.

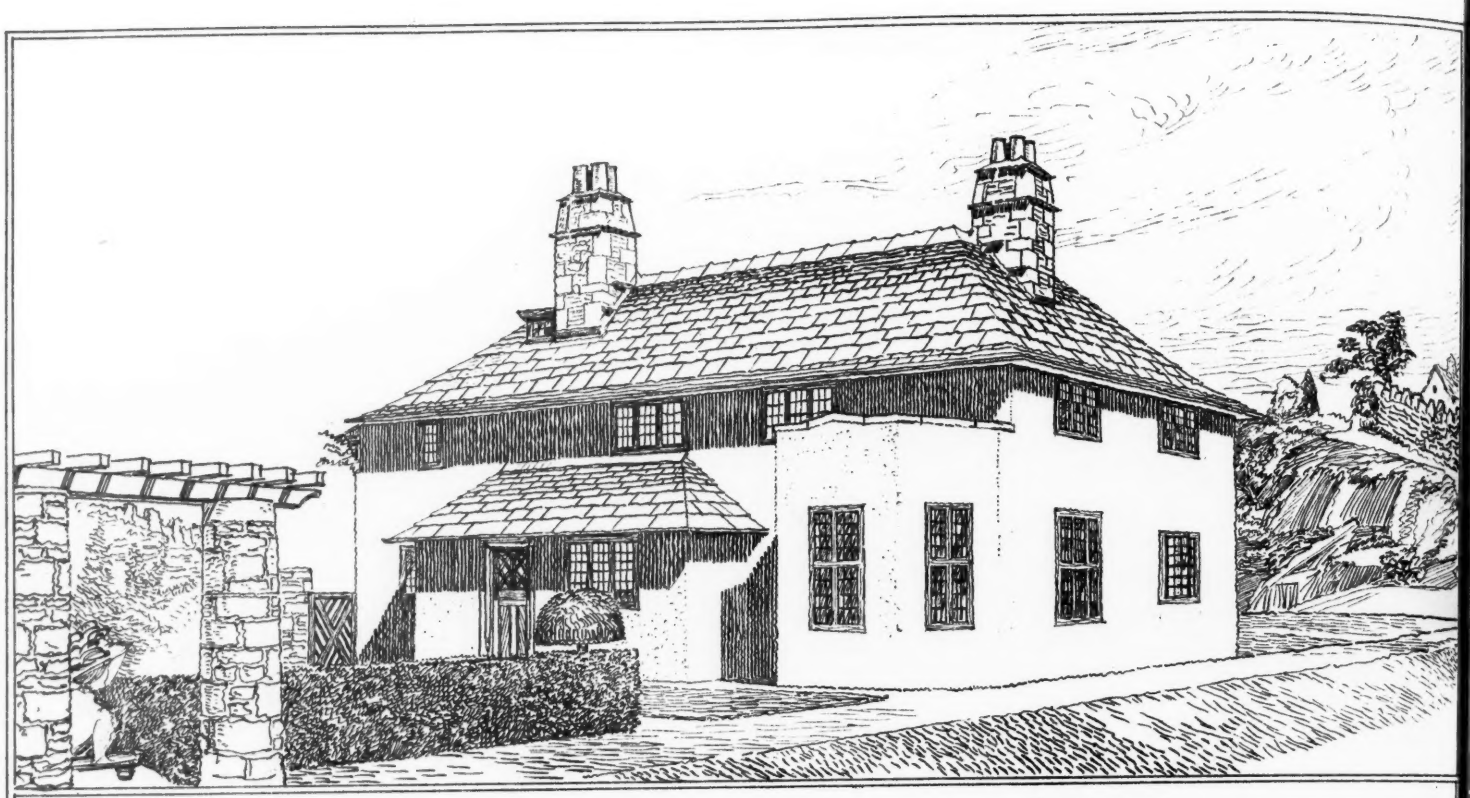
THIS new work comprises the re-erection of the station buildings, having frontages to the station courtyard and Wilton-road.

A portion of the site was once occupied by a canal basin, and, owing to the nature of the foundations, it was found necessary

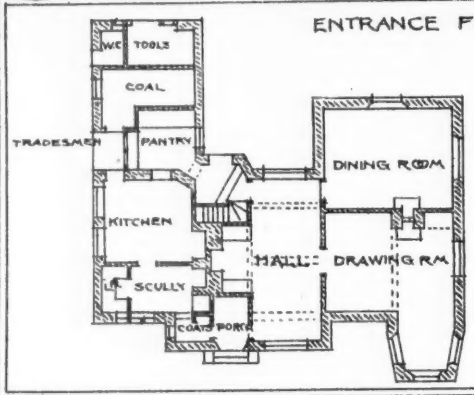


S·E AND CR·Y
VICTORIA STATION
PLAN OF NEW BUILDINGS
AT GROUND FLOOR:

Scale of 10 5 0 10 20 30 40 50 60 70 80 90 100 feet



ENTRANCE FRONT

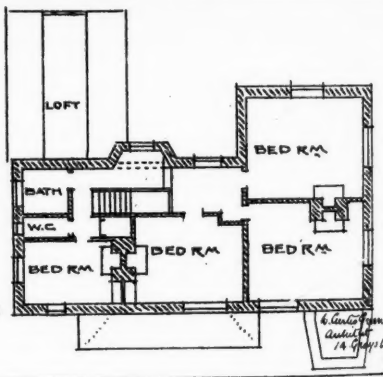


GROUND PLAN

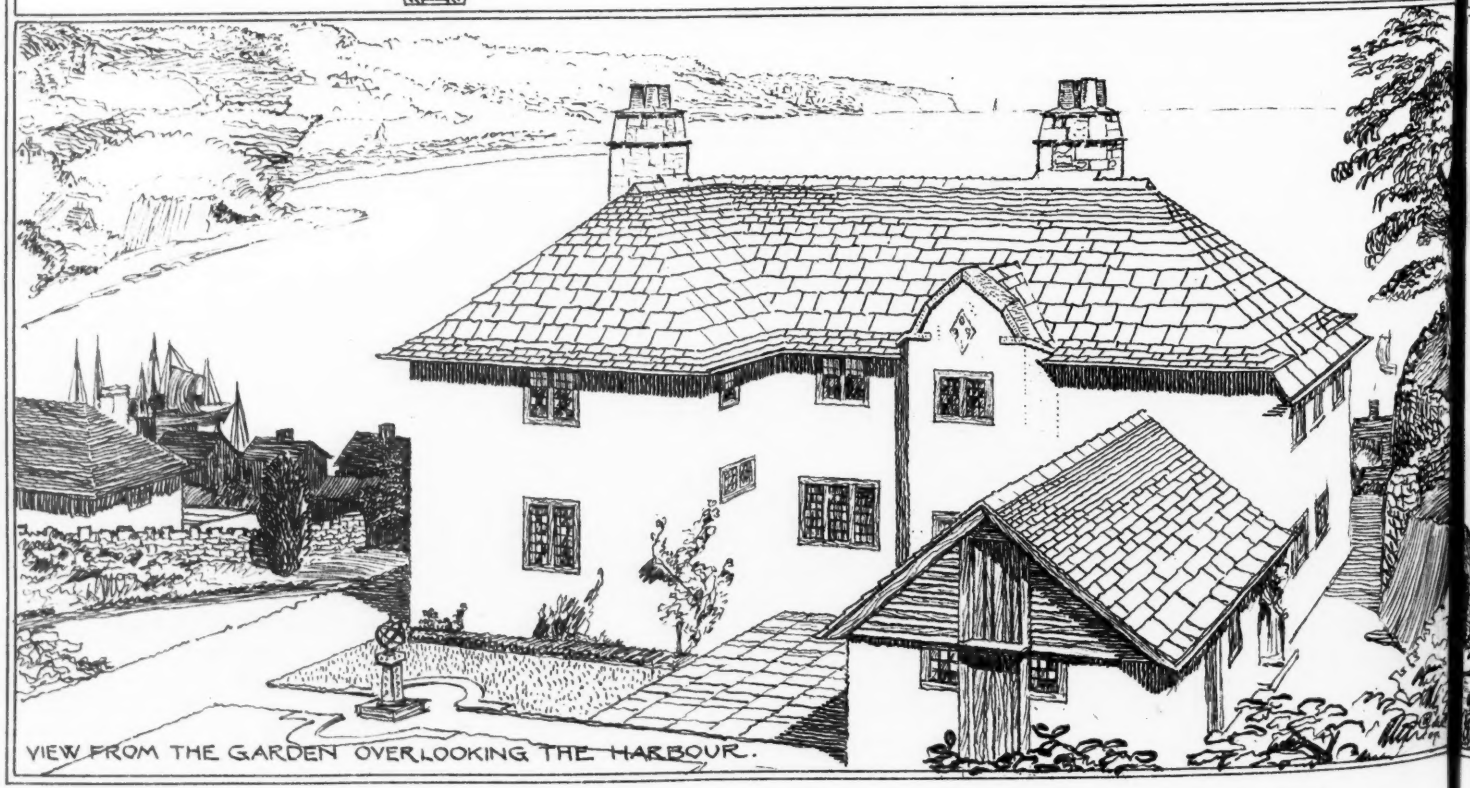
HOUSE AT BRIXHAM S. DEVON

FOR THOS: BAREFOOT ESQ.

BUILT OF STONE QUARRIED ON THE SITE. ROUGH CAST ROOFED WITH DELABOLE RAG SLATES WITH IRON CASEMENTS AND LEADED GLAZING



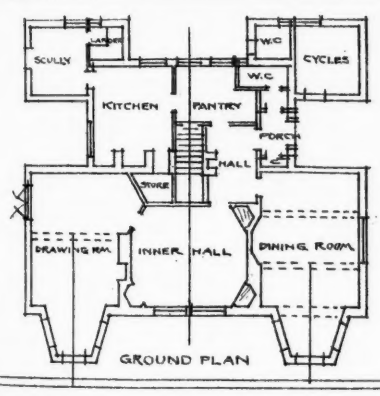
BED ROOM PLAN



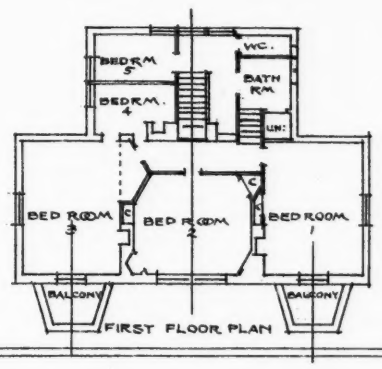
VIEW FROM THE GARDEN OVERLOOKING THE HARBOUR.

HOUSE FOR THE GARDEN SUBURB DEVELOPEMENT COMPANY, HAMPSTEAD.

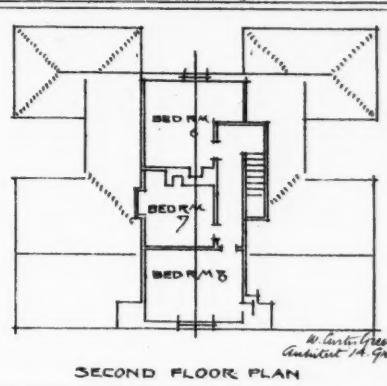
SOUTH FRONT



GROUND PLAN



FIRST FLOOR PLAN

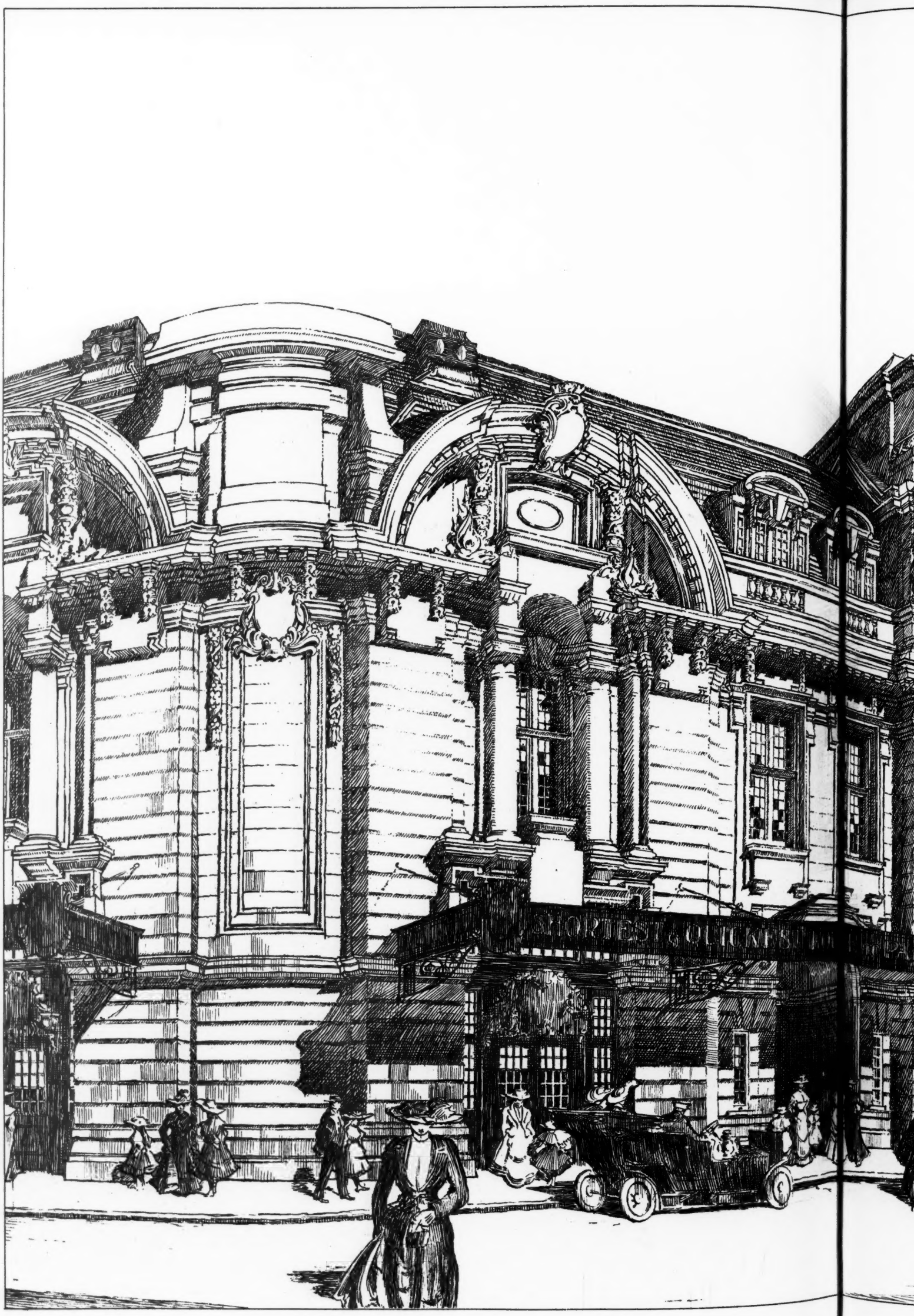


W. Curtis Green
Architect 14 Grays Inn Square W.C.

SECOND FLOOR PLAN

NORTH FRONT

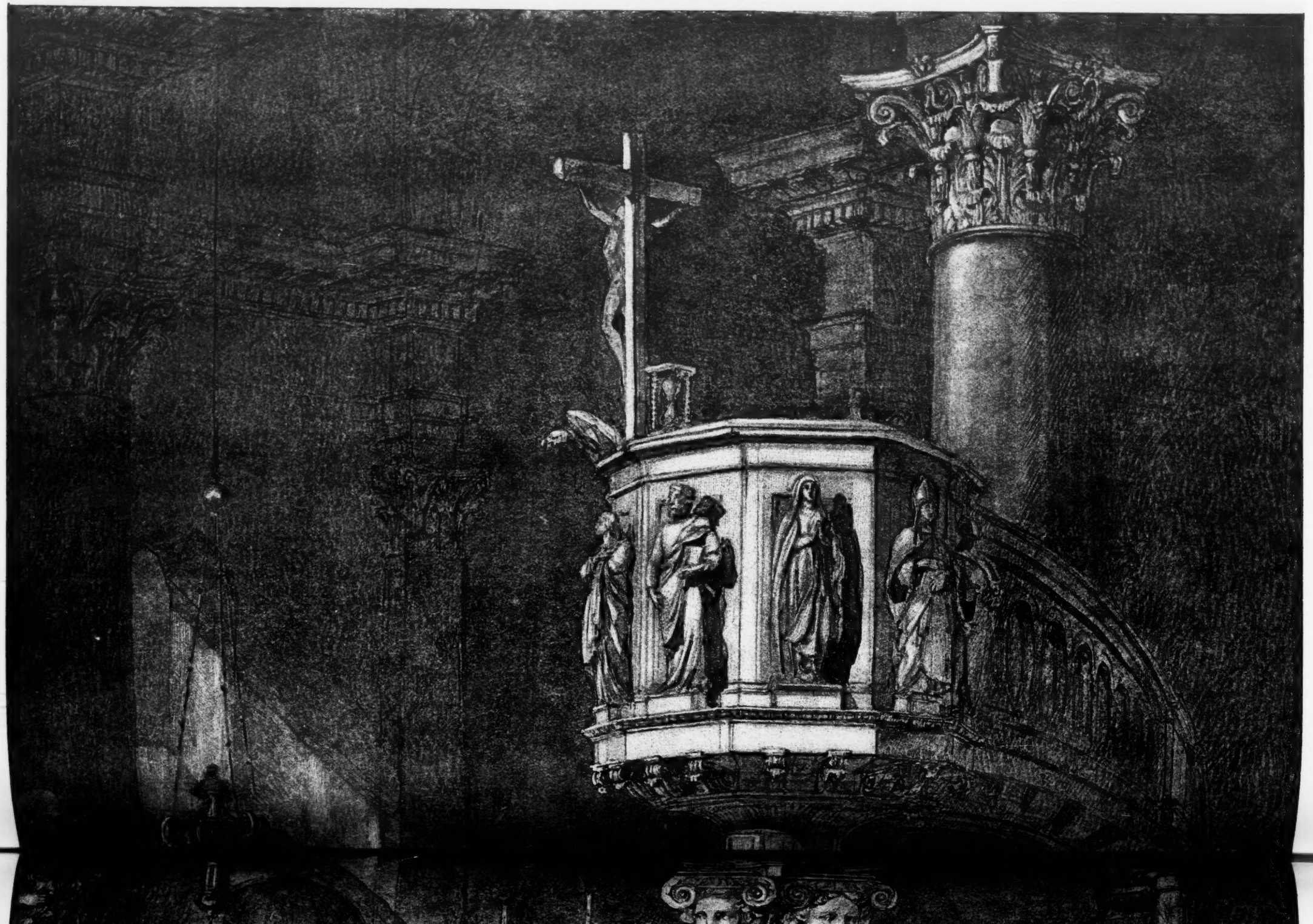
PHOTO-LITHO. SPRAGUE & Co L.: 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.


HORIES & QUICKS

S.E. AND C.R.C. VICTORIA STATION

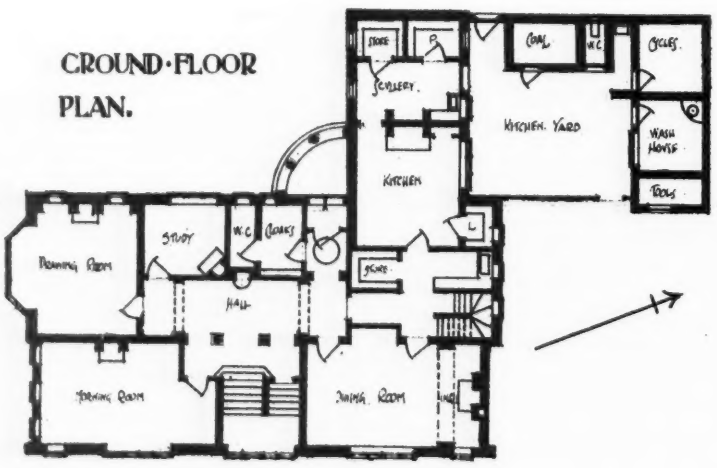
FRONTAGE TO STATION COURT DESIGNED BY ALFRED W. BLOMFIELD

PHOTO-LITHO. SPRAGUE & Co LD. 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.



"INK-PHOTO" SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

PULPIT, MESSINA CATHEDRAL.—From a Drawing by Mr. A. C. Conrade.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CYCLES
KITCHEN YARD
WASH HOUSE
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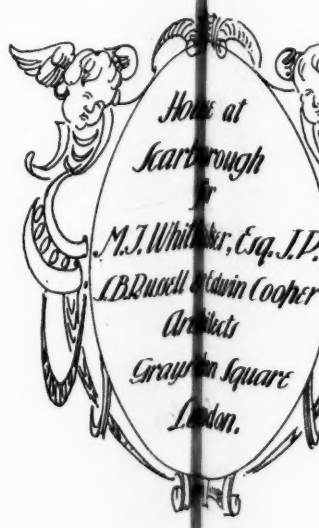
CLOAKS
DRAWING ROOM
HALL
STORE
DRAWING ROOM
DINING ROOM


House at
Scarborough
for
M.J. Whitaker, Esq. J.P.
L.B. Duvell & Edwin Cooper
Architects
Grayson Square
London.

House at Scarborough for M.J. Whitaker, Esq. J.P. C.B. Purcell & Edwin Cooper Architects Grayson Square London.

FIRST·FLOOR PLAN.

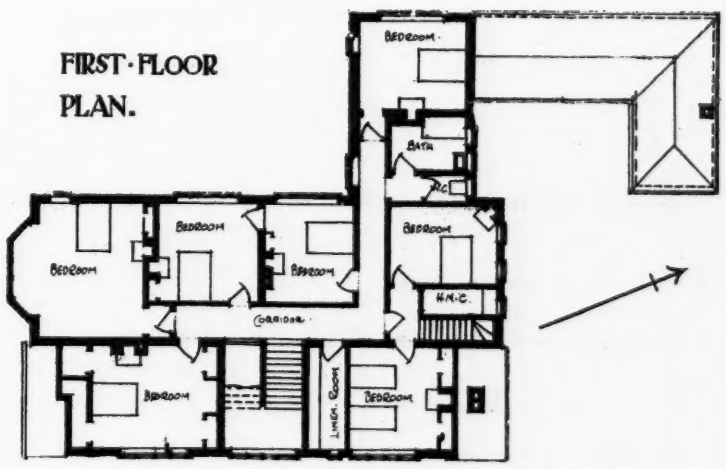


PHOTO-LITHO. SPRAGUE & Co. L.t. 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

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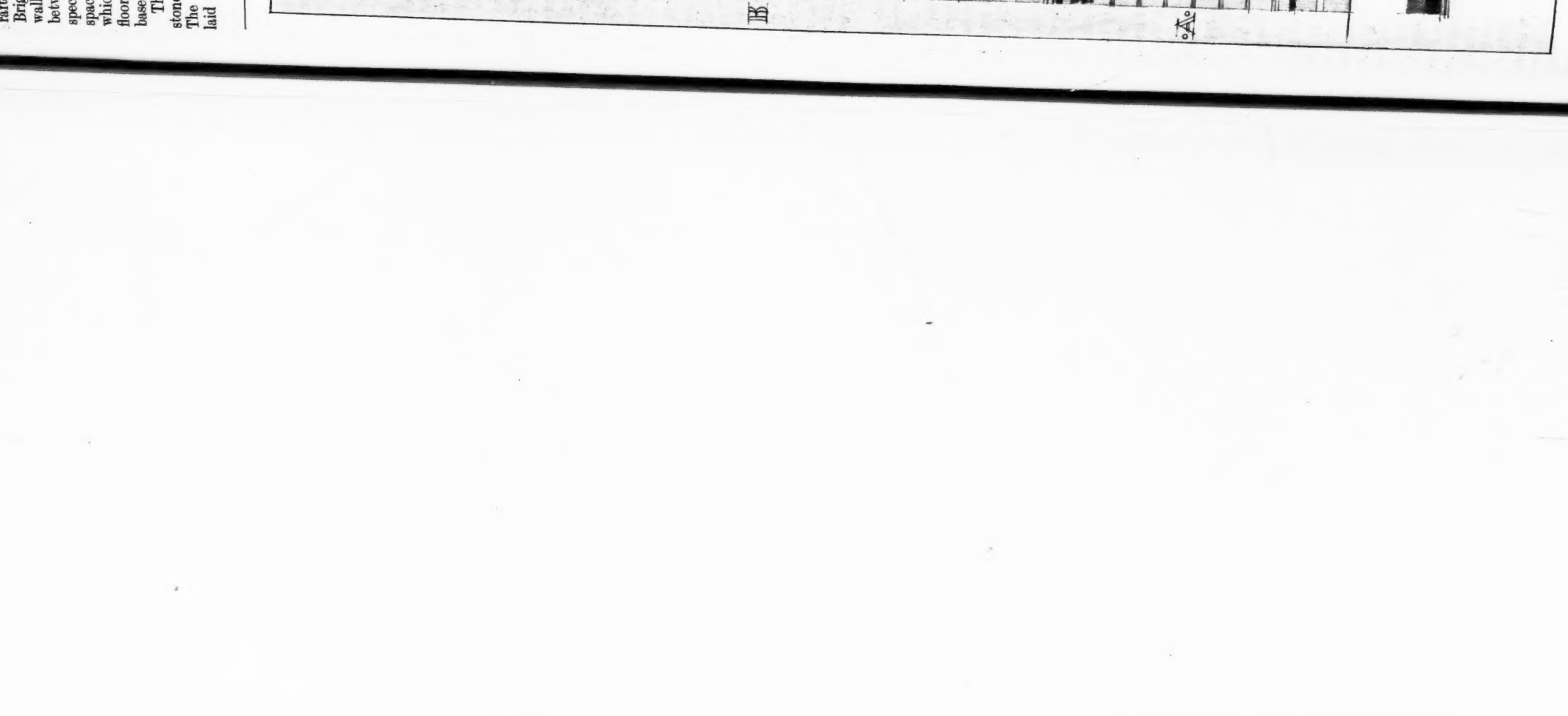

to excavate to a depth of 27 ft. below road level and construct a reinforced concrete raft 6 ft. thick, extending from the London, Brighton and South Coast Railway Company's wall at end of buildings to the party wall between cloak-room and booking-hall. A special feature of the new building is the space allotted the refreshment department, which includes a restaurant on the first floor, 160 ft. by 38 ft., and one in the basement, 100 ft. by 56 ft.

The two frontages are faced with Portland stone, with the plinth in Cornish granite. The roof is covered with Welsh green slates laid in graduated courses.

Three bays of the old station roof have been removed and replaced by a new roof, designed on the ridge and furrows principle, and opportunity has been taken of improving the circulating area inside the station.

The work has been executed under the control and supervision of Mr. Percy C. Tempest, the engineer to the Managing Committee, and Mr. W. J. Ancell, architect. The elevations have been designed and detailed by Mr. Alfred W. Blomfield. The sculpture is by Mr. Hy. C. Fehr. Messrs. Higgs & Hill were the contractors for the work.

HOUSE AT SCARBOROUGH.

THIS house has been recently erected at Scarborough. The materials are mainly local, and the builders are as follows:—

Brick and plaster	Messrs. Jaram & Sons.
Carpenter and joiner	Messrs Jowsey & Son.
Smith and plumbing	Messrs. Clough & Tasker.
Tiler	Messrs. J. Hardgrave & Son.
Painter	Messrs. Bradley & Son.

The leaded lights were made by Mr. William Smith.

The marble work by Messrs. Whitehead & Sons.

Messrs. Russell & Cooper are the architects.

New Front, South-Eastern & Chatham Railway Station, Victoria. Detail Elevation.

HOUSE AT BRIXHAM, SOUTH DEVON.

THIS house is now being built at Brixham, above the Berry Head-road. The stone is quarried on the site; the walls will be covered with fine rough cast. The roof covering is of Delabole rag slating laid in diminishing courses. The iron casements and leaded glazing are the work of Messrs. Hope. Messrs. T. W. Falkner & Sons, of Old Kent-road, London, are the builders. Mr. W. Curtis Green is the architect.

HOUSE FOR THE GARDEN SUBURB DEVELOPMENT COMPANY, HAMPSTEAD.

THIS is a design by Mr. W. Curtis Green for a house at Hampstead for the Garden Suburb Development Company. The house has not yet been built.

ASSOCIATION OF MUNICIPAL AND COUNTY ENGINEERS.

A MIDLAND COUNTIES district meeting of the Association of Municipal and County Engineers was held at Malvern on Friday and Saturday, May 28 and 29. Mr. E. Purnell Hooley (Nottingham), President, was in the chair, and there were present Messrs. W. Harpur (Cardiff), A. E. Collins (Norwich), A. D. Greatorex (West Bromwich), J. S. Pickering (Cheltenham), P. G. Killick (Finsbury), H. G. Whyatt (Grimsby), R. H. Dorman (Armagh), S. G. Rogers (Chard), J. P. Spencer (Tynemouth), F. W. Richardson (Aston), E. J. Silcock (Westminster), G. W. Lacey (Oswestry), T. Caink (Worcester), W. Weaver (London), J. B. Purser (Kesteven), J. A. Spreckley (Ludlow), F. E. E. Fellows (Willenhall), W. O. Thorp (Malvern), T. Cole, Secretary, H. A. Giles, Assistant, H. H. Richardson (Handsworth), C. A. Clews (Derby), H. W. Barker (Handsworth), and others.

Mr. A. D. Greatorex (West Bromwich) proposed the re-election of Mr. H. H. Richardson as Honorary Secretary for the district.

Mr. W. Osborne Thorp (Malvern) seconded the resolution, which was carried unanimously.

Mr. H. H. Richardson thanked the members for his re-election.

Municipal Works of Malvern.

Mr. W. Osborne Thorp (Borough Surveyor, Malvern) read a paper on the municipal works of Malvern. He said that in the year 1821 the population was 1568, but even then Malvern was famed as a health resort, for we read in Chambers's "History of Malvern" that "it is now the custom during the season to let out the workhouse to visitors, and the money gained this way is applied to the funds for maintaining the poor!" Would that we could relieve our poor rates in that way now! The author referred at some length to what is known as the Hydro case, which has recently been decided by the House of Lords in favour of the district council. Briefly, in May, 1905, an explosive outbreak of typhoid fever occurred at the Hydro, which subsided as quickly as it arose, involving a number of the inmates, no one outside being affected. The Hydro at that time did not use the town supply of water, but had several private ones, among which was one described as coming from a source unknown, and this was undoubtedly suddenly and dangerously polluted. Further investigation proved that this supply was carried by open-jointed pipes down a public path, and had been diverted from a wash-out drain discharging into the storm-water drains and leading from a well in connexion with some old disused baths, which the Council then held on lease. By some means the plug in the bottom of the storage tank of the well had been altered so as to permit water to flow down this drain and consequently to reach the Hydro, whilst over this open-jointed wash-out drain, a 6-in. soil drain was carried. This drain had become choked through some foreign matter being thrown in, and a leaky joint near a manhole permitted sewage to escape and flow down through the broken ground overlying the open-jointed wash-out drain above referred to, thus polluting the water therein. In the action brought against the Council, after a trial lasting nearly three weeks, the jury decided that the Council were negligent in permitting their sewage to escape, but held that the Hydropathic had no right in any shape or form to the use of this water, and awarded them 7,500*l.* damages. In May last the Court of Appeal unanimously reversed this judgment, holding that if no right could be shown to the use of the water, the user must stand in the same position as a trespasser and be responsible for the results of his actions. The House of Lords had upheld the decision of the Court of Appeal in favour of the Council.

Mr. W. Weaver (London) moved a vote of thanks to Mr. Thorp for his paper. He said that the tar-painting of roads was a matter which was receiving the attention of every road surveyor in the Kingdom, and it seemed to him opinion was formulating itself on some well-defined lines which were yielding very good results. In his own district the roads had immensely improved now that they had tar painted the old macadam. He should say that the expense of tar painting was more than recouped by the saving that was effected in scavenging and watering.

Mr. H. Gilbert Whyatt (Grimsby), who seconded, asked whether they had tried to make tar-macadam out of the granite from the Council's quarries, and whether either of the stones obtained were suitable for that purpose.

Mr. A. E. Collins (Norwich) said he had tried a mixture of sulphuric acid with tar, but until one had tried it for some years one could not be certain of getting good results, for tar was a peculiar material.

Mr. G. W. Lacey (Oswestry) asked how frequently Mr. Thorp found it necessary to effect a clearance of the reflux valve on the ejector, as he himself had found some difficulty from clogging round these. It was amazing what did find a way into these. Only the other day he had to take out the inlet valve, and a portion of a dead kitten was found there.

Mr. F. Caink (Worcester) asked the author whether he would recommend the general adoption of meters in cases where there was a fairly abundant supply of water.

The President congratulated Mr. Thorp on the low cost of the new Council school. In connexion with the maintenance of highways he felt very strongly that it was a wrong data to calculate at the rate per mile. His opinion was that the cost of roads ought to be standardised at per yard of surface.

Mr. Thorp, in reply, said that the remarks of Mr. Weaver as to the saving in scavenging and watering by tar painting was fully borne out by his own experience. On the roads they had tar painted the cost of scavenging and watering was very little, and the life of the road was extended for eighteen months to two years longer. A question was asked whether they had made tar-macadam from the granite obtained from the local quarries. They had done so and found it fairly effective.

The Tank Treatment of Sewage.

Mr. A. P. I. Cotterell, M.Inst.C.E., read a paper on the tank treatment of sewage, based on the fifth report of the Royal Commission.

He said the Royal Commission on Sewage Disposal had proposed, and quite rightly, to differentiate not only between sewage of varying strengths, but also between the different kinds of tanks generally used for primary treatment. Sewage had been roughly divided by them into three classes—strong, medium, and weak. They also proposed that the general design of the remainder of the works, especially the capacity of the filters, should be dependent upon the class of primary tank that was adopted, basing their figures upon five different types of tank more or less representative of those at present in use.

The Local Government Board had practically adopted these proposals and had issued instructions based upon them. The tank treatment to be adopted, therefore, became a more than ever vital part of the design.

The classification of tank treatment was under the following five heads:—(*a*) Septic tanks, (*b*) Continuous flow settlement without chemicals, (*c*) Quiescent settlement without chemicals, (*d*) Continuous flow settlement with chemicals, (*e*) Quiescent settlement with chemicals.

All were generally agreed that, except possibly in very small sewage works, tank treatment, even if it be only a detritus tank, was necessary. Even with land irrigation some form of tank was valuable, and tended to reduce the liability of nuisance through clogging or ponding of the surface.

One of the most important factors in tank design was the effect of storm water. The normal variation of the dry weather flow, whether from domestic habits or from trade wastes, occurred at predetermined times and could be arranged for. But storm flow is a complete uncertainty and could only be limited as regarded quantity, not as regarded time. Increased flow due to storms compensated itself to some extent in that the sewage was more dilute, but even then the more rapid flow caused in the tank was harmful if continuous flow settlement or septic action was relied upon.

The Local Government Board proposed to limit the quantity of sewage and storm water to be dealt with by the tank to a maximum of three times dry weather flow, stipulating that the surplus up to six times dry weather flow should be poured into stand-by tanks, or, when sufficient suitable land was available, on to a special irrigation area as in the past. Storm filters were happily to be given up. The storm overflow was to be placed at the further end of the stand-by tanks, and the supernatant water in the tank might run over the filter (if such was possible) when the storm ceased.

The storm stand-by tanks need only be, so the Royal Commission thought, equal to one-quarter dry weather flow. The Board had adopted the same capacity with the proviso that it should be at least one-quarter. One was inclined to think that this dimension was too small. If the intention was to store excess water during storms and discharge it when the storm was over, only using the storm overflow on exceptional occasions, then the data by which the commissioners arrived at this capacity were scarcely reliable. The relative quantity of storm water discharged varied inversely with the size of the works. At Horfield, one of the places used by the Commissioners for this purpose, the author who designed the works had records, when the population served was about 3,000, of storm flows fifty times greater than the daily dry weather flow lasting for twelve hours or more.

The Commissioners seemed to have based their figures on gaugings between prolonged intervals or on flows in summer weather, and not enough on their own statement that it was so much the actual quantity as the rate at which storm water flowed off, which should govern the capacity of the stand-by tanks. It was, however, only fair to say that they regarded their proposals as tentative.

The object of tank treatment was to produce a satisfactory effluent at as little expense as possible, and a satisfactory effluent might be defined as a readily oxidisable liquid containing not more than twenty parts of suspended solid per 100,000. The formation of sludge, except as a means to this end, was not sought for. Whether the day would ever come when sludge would be accumulated because of its own value it was impossible to say. It certainly was not

here yet. If it came the purification of sewage would become a simple matter. One of the advantages of tank treatment was that it tended to equalise the sewage. This was espcially the case with the septic tank, because its capacity was greater than other types. The subdivision of tank treatment by construction of a small preliminary detritus tank to intercept grit and mineral matter was general, except in very small works. The tendency was now to make detritus tanks smaller, so as to act as catch-pits only. The Board asked that they should be not more than $\frac{1}{100}$th dry weather flow. Many detritus tanks were too large, and act as liquefying tanks.

If sewage passed through the tank too quickly and in too fresh a state (as in the form of fat), was it detrimental to the filters? The ideal was to hit the happy medium. In fact, it was becoming realised once again that tank treatment was a very delicate operation requiring close attention and a trained mind. Sewage works could not be left untended and run satisfactorily, although they should be always made as independent of human agency and frailty as possible.

Such being the case, it became a question, at which in fact the Royal Commission appeared to hint, whether some amount of chemical treatment was not sometimes economical.

Fall was always a very important factor at sewage works. Unless pumping was adopted there was generally far too little of this commodity. Those tanks, therefore, where the outlet level was almost as high as the inlet had a distinct advantage over those where the outlet was at the base of the tank.

The Royal Commission found no appreciable difference in purification between a covered and an uncovered septic tank. It was a great disadvantage in a covered tank that the process of liquefaction could not be watched, and over-septicisation was not seen until its bad results were apparent at the outlet. The idea of practically utilising the gas in a septic tank must be given up except in hot countries. On the other hand, some covering to protect from sight and from wind was an advantage to septic sewage. The ideal would appear to be a roof over the tank under which men could work.

A septic tank required a coarse-grained filter because of the large proportion of suspended solids brought over. The Commission put this at fifteen to twenty parts per 100,000, but at times it might even be much greater. At such times even a coarse-grained filter was unduly strained, and sooner or later the works must suffer.

It was now fairly clear that it was safer to draw off small quantities of sludge from septic tanks at frequent intervals than to run the risk involved by allowing a long period to elapse. All this told against the septic tank, which was never designed for the rapid removal of sludge. In fact, in the earlier tanks no provision was made for sludge removal, and none was apparently anticipated.

The hydrolytic tank was only mentioned by the Commission, but it needed much fuller treatment. Its mechanical value was considerable. In a sense it was a scientifically designed septic tank in which the mechanical disadvantages of the latter were largely avoided, but taken in conjunction with the hydrolysing chambers that followed it emphasised the value of the mechanical treatment of sewage. Very little reliance was, in fact, placed on anything else at Hampton. There was admitted to be some oxidation in the filters, but bacterial action was considered of very little account. Instead of the liquefaction claimed in the septic tank, the opposite was claimed to take place in the formation of colloidal matter. When closely examined, however, the contradiction was more apparent than real. It was possible for both processes to go on. But the value of the mechanical operation had been too much overlooked in recent years, and it was well that attention should be thus directed to it again. In Germany, as may be known, much attention had been directed to this feature of sewage disposal.

The slate beds also incidentally referred to by the Commission appeared to be at the opposite pole to the hydrolytic tank. The Commission rightly regarded the slate-bed tank more as preliminary tank than as a contact bed, though they were scarcely right in calling it a septic tank, seeing that its action was aerobic and not anaerobic. In one sense the hydrolytic tank and the slate bed had something in common, in that they both aimed at exposing numerous surfaces for the mechanical retention of solid—Dr. Travis in his hydrolysing chambers, and Mr. Dibdin on his slates. The difference (and it was a marked one) was that the latter claimed the aid of numerous worms and low forms of aerobic life to reduce the sludge on the slates to "humus." Here, as in the case of the septic tank, from which it differed so completely, care must be exercised to prevent an excess of solids being washed out to the filters. The intervention of a wide channel or an upward flow tank was desirable. The author was adopting the latter course for the new sewage works at Harpenden.

As regarded settlement tanks, both continuous or quiescent, and with or without chemicals, all forms of rectangular tank appeared to be suitable provided they were not so large as to set up septic action in any marked degree. The limits given by the Royal Commission were quiescent settlement for two hours or continuous flow settlement for fifteen hours when no chemicals were used, and quiescent settlement for two hours or eight hours' continuous flow settlement when chemical precipitation was adopted.

Vertical or upward flow tanks were not specially referred to by the Commission, except as a substitute to the macerating tank or roughing filter sometimes interposed between the primary and secondary treatment. But it had claims as a primary settlement tank especially when used in connexion with chemical precipitation. Mechanically it was more efficient than a flat-bottomed settling tank, in that the two lines of flow, the falling solids and the rising liquid, were directly opposed, and clarification was more rapid. A vertical tank could never act properly as a septic tank, because the length of stay of the sewage was too short, and septic action could only be set up by a huge collection of foul sludge. In a test made by the author on a vertical tank with a capacity of 8,500 gallons to the commencement of the cone base, an inlet depth of 12 ft. and a diameter of 12 ft., the time of passage from inlet to outlet was only five minutes, and most of this was occupied by the float in travelling horizontally across the tank to the outlet, but the clarification was remarkable. The vertical tank also lent itself to the frequent removal of small quantities of sludge. A difficulty had been found in the tendency of water to escape up the sludge-pipe before the sludge, but if the sludge-pipe was started downwards from the apex of the cone bottom, so that gravitation might help the flow of sludge, this might be largely avoided. The vertical tank was simple to build, in spite of being so much deeper than the horizontal tank, and was not so liable to settlement.

Mr. E. J. Silcock (Westminster and Leeds) moved a vote of thanks to Mr. Cotterell for his paper, which was seconded by Mr. A. E. Collins (Norwich), and supported by the President, and carried.

At a special general meeting of the members on Saturday a resolution was passed with one dissentient, to change the name of the Association to the Institution of County and Municipal Engineers.

Legal Column.

TRADE UNIONS AND THE LAW.

The case of Cope *v.* Crossingham, noted in the Court below (the *Builder*, August 15, 1908), has been carried to the Court of Appeal, and illustrates the unsatisfactory condition of the law as applied to Trade Unions.

In this case the dispute was between the General Executive Council of a trade union and one of its branches. The dispute was in its nature one that is very common between unions and employers. The General Executive Council had suspended from his duties the General Secretary, and the branch in question resented this action on the part of the General Council, and passed a resolution that if it were persisted in the branch would secede from the union and divide the funds in its hands amongst its members. The General Council then brought this action against the trustees of the branch, claiming (1) a declaration that the resolution in question was *ultra vires*, (2) an injunction, (3) the removal of the trustees and the appointment of other trustees, and (4) administration of the funds of the branch. The defendants set up sect. 4 of the Trade Union Act, 1871, which enacts that the Courts shall not entertain any legal proceeding instituted with the object of directly enforcing agreements for the application of the funds of a trade union to certain objects. The Court of Appeal held that the prevention of a misapplication of the funds was not "directly enforcing" within the meaning of the section, and that there was jurisdiction to entertain the action, and having considered the effect of the rules of the union, the Court affirmed the decision of the Court below, with the addition that they also granted an injunction restraining the trustees of the branch from distributing the funds; but as the plaintiffs failed in their claim for administration, *i.e.*, to have the branch funds paid to them, an order was made as to the costs of the appeal. The anomalous state of the law is illustrated by this case. The trade unions can in certain cases resort to the tribunals of the land for a settlement of their internal squabbles, but under the Trade Disputes Act, 1906, the unions cannot be called to account by any member of the public for a tortious act alleged to have been committed by, or on behalf of, the trade unions. The great codes of laws, such as the Roman law, which have been handed down through the ages contained no anomalies of this description, and it is impossible to imagine what future students of the laws of this country will think of class legislation of such an inequitable a nature.

DEDICATION OF HIGHWAYS.

The case of Coats *v.* Herefordshire County Council raised an interesting question as to the ownership of a strip of land alongside a highway. For some years before 1860 the land in question was vested in a company by a private Act of 1811, who used it for a horse tramway. In that year (1860) the property was transferred to another company, who in 1865 abandoned the tramway and took up the rails and the setts on which they were laid. In 1874 the Midland Railway acquired the company, and in 1906 the land, including the strip in question, was conveyed to the plaintiff, who enclosed the land, but left a strip of land 6½ ft. to 8 ft. wide between his fence and the road. The case first came before the Court in January last, the point then to be considered being whether there could have been a dedication at relevant times. The Court then held that since 1865 it was quite possible that the land should have been dedicated by the company. The trial on the facts recently came on for hearing. It was proved that the tramway track had been available for all highway traffic except driving carts and vehicles openly and continuously, and that since 1865 the highway

authority had laid drains and culverts in the strip without objection being raised. The land being capable of dedication and there being a body of persons capable of dedicating it, who had exercised acts of ownership over other portions of the land, but had permitted the use by the public of the strip in question, the Court held that there had been dedication, and that the plaintiff's claim failed.

ROAD AUTHORITIES *v.* RAILWAYS.

The case of the Hertfordshire County Council *v.* Great Eastern Railway Company, previously referred to in our columns, has since been appealed, and the Court of Appeal affirmed the decision of the Court below (noted the *Builder*, January 2, last). In this case the railway had been constructed under an Act of Parliament, 6 & 7 Geo. IV. ciii., and the line crossed certain main roads at a higher level, so that to reach the level crossings an incline had to be made, and the question was who was liable to repair these inclined approaches. The railway company admitted liability to repair the roads between the gates to the level crossings, and the Court below held that their liability extended under the common law to the approaches. The Court of Appeal adopted the same view, and held that there was nothing in the special Act under which the line was constructed to oust the common law principle that when a body of persons are authorised to cut through a public highway they must supply and maintain an equally convenient passage for the public. The difficulty in these cases appears to be the determination whether the common law principle above stated and applied is varied by either the special Act under which the railway is constructed or by the Railways Clauses Consolidation Act, 1845. In the case under consideration the special Act was of earlier date than the Railways Clauses Consolidation Act, and the special Act did not govern the matter in dispute. Where the Railways Clauses Consolidation Act applies there is a decision of the King's Bench Division—West Lancashire Rural District Council *v.* Lancashire and Yorkshire Railway (1903)—which absolves the companies from liability to repair the approaches to level crossings. This question may still be reversed by the Court of Appeal, as the decision now given does not touch the law under the Railways Clauses Consolidation Act.

SEWERS AND TRADE EFFLUENT.

The House of Lords have given an important decision in the case of Brook & Brothers, Ltd., *v.* Meltham Urban District Council. This case will be found noted in the *Builder*, July 11 and August 8 last, and it raised the point what was the meaning of the word "sewer" in sect. 7 of the Rivers Pollution Prevention Act, 1876. The appellants were manufacturers who were claiming to be allowed to pass the liquids from their works down the respondents' sewers, under the provisions of sect. 7 of the above Act. The sect. provides that the local authorities shall give facilities for enabling manufacturers within their districts to carry such liquids into the sewers subject to two provisos; the first is that the effluent shall not be of a character prejudicially to affect the sewers or the sewage matter or be insanitary, the second proviso being that the authorities need not offer such facilities where the sewers are only sufficient to meet the ordinary requirements of the district. This case really turned on the second proviso; the sewers themselves were capable of taking the liquid in addition to the ordinary sewage, but the purification works connected with the sewers could not take the whole of it. The Divisional Court had limited the proviso as applying only to the actual pipes, and not to the sewage system as a whole, and had given judgment for the manufacturers. The Court of Appeal reversed this finding, and now the House of Lords has affirmed the Court of Appeal. The House intimated that the word "sewer" had a different meaning under the Rivers Pollution Prevention Act, 1876, to that attached to it in the Public Health Act, 1875, and that it included the whole system by which fluids were enabled to pass to their ultimate destination, and that therefore in this case the sewers were only sufficient for the requirements of the district, and the District Council were under no obligation to afford the facilities claimed.

Competition News.

THE NATIONAL LIBRARY OF WALES.

At the annual meeting of the Governors of the National Library of Wales, held at Aberystwyth last week, the report was presented of Mr. Reginald Blomfield, Professor of Architecture at the Royal Academy, who had been chosen assessor of the plans for the new buildings. He selected the plans sent in by Mr. Sydney K. Greenslade, of London. The new buildings are estimated to cost 85,000*l*.

GRIMSBY TOWN HALL EXTENSION.

The General Purposes Committee of Grimsby Town Council have decided in favour of Sir Alfred Gelder, of Hull, being appointed assessor for the competition with regard to the extension of the Town Hall. The Committee have considered several letters from architects with reference to the conditions of the competition. It has been resolved that the conditions be adhered to.

ELLAND SECONDARY SCHOOL.

During the past month or so many meetings of the Elland Secondary School Governors have been held for the purpose of considering the competitive plans which have been sent in by architects desirous of assuming the responsibility of directing the building of the new school, for which an excellent site has been acquired in Victoria-road. The accommodation to be provided is for 200 girls, and the total cost is estimated at 12,000*l*. Originally there were sent in forty-five sets of designs, or nearly 200 different plans. When the plans were first opened for inspection, fourteen sets were selected by the Governors, and were subjected to special consideration and report by Mr. Vickers Edwards, the West Riding County Architect, who had been retained as assessor, and Mr. A. V. Houghton, principal of the Secondary Education Department of the County Council. Further meetings were then held, and as a result of the reports which were received from those two gentlemen there was another reduction of the plans to four. On Wednesday (May 26) there was another meeting for the purpose of arriving at a final decision. The whole of the Governors were present, and the meeting was presided over by Mr. J. H. Riley, the chairman. Design No. 31 was ultimately accepted, and on the sealed envelope being opened it was found that the successful design had been sent in by Mr. W. S. Braithwaite, of 6, South-parade, Leeds. The Governors adopted Mr. Braithwaite as the architect for the new school.

Trade Catalogues.

MR. PERCY PITMAN sends us a circular containing illustrations and a description of his Pelton wheel with hydraulic relay governor. The wheel works under a head of 120 ft., and with both of its nozzles in operation develops 80-brake-horse-power. The velocity of the wheel is regulated by moving two deflectors into the path of the jets from the nozzles, both deflectors being operated simultaneously. The circular gives detailed drawings of the governing device, which is driven by belting in conjunction with bevel gearing. The maker states that under normal conditions of work the governor will keep the velocity of the wheel constant within the limits of 3 per cent., and that the mean velocity can be adjusted through fairly wide limits by lengthening or shortening a link connected with the hand regulating lever.

Messrs. Walton Gooddy & Cripps, marble quarry owners and merchants, send us a series of illustrations of the working of their marble quarries at Carrara, and of buildings executed in marble supplied by them. These include the marble used for the Queen Victoria Memorial opposite Buckingham Palace, which has been very carefully selected, and appears to be beautiful material throughout.

BOOKS RECEIVED.

ANNUAL DIRECTORY OF CONTRACTORS AND PUBLIC WORKS: 1909. Edited by M. Sharpe. (The *Contractors' Chronicle* Office. 15s.)

MODERN HOMES: described and illustrated by T. Raffles Davison. (Geo. Bell & Sons.)

Correspondence.

"A DIPLOMA COURSE IN ARCHITECTURE."

SIR,—I think there is no need for me to say that if I had borrowed the idea of the foundation of a Diploma Course of design, to which all the architectural schools throughout the country would send each year their most distinguished students for a final course of training in higher design, I should have acknowledged the source of my inspiration.

I missed reading the Royal Institute of British Architects' *Journal* for February, and my idea for the foundation of the Diploma Course is the outcome of my own personal work in connexion with architectural education. It is interesting to find that American thought is moving in the same direction, and particularly that it is in agreement with me in acknowledging the excellence of the work done there in the schools throughout the country, and the necessity that this higher course of design should not interfere with the work of the existing schools.

There is room for all conditions of local thought and individuality, and one of the advantages of the Diploma Course will be that it will bring the best products of local individuality together for a supreme test, and the results of this test are bound to act as an influence on the education of the architectural student throughout the country.

A. BRUMWELL THOMAS.

LAND TAXATION.

SIR,—In the consideration of this subject there is one aspect which, with your permission, I would like to emphasise. The conditions under which the building trade have laboured in the past where land development was concerned, have not invariably been of an ideal character. The differential treatment of land having potential building value, as proposed in the new Finance Bill, is a recognition (if an unpleasant one) of the advantages which the owners of such land possess over those whose land, through no fault of their own, has an agricultural or accommodation value only.

The revaluation to be made for the new tax will fix the amount of the increment largely on the owner's estimate, after making due allowance for all expenditure on unexhausted improvements for an unlimited time backwards. If the margin of profit or increment is not likely to rise, there will be no object in the owner holding on as a speculation, unless he can lower his price.

A halfpenny in the pound annually on profit capital value may not be a serious deterrent, but the prospect of having to pay 20 per cent. on that profit when realised is another matter altogether.

This change of conditions is bound to affect the building trade, or at least that portion of it which is interested in the growth of our suburbs; and, however the landowner or speculator may be affected, I think the balance of advantage will be decidedly with the builder. Hitherto he has had to negotiate for land which has sufficiently ripened and for which a high price can be asked. Owners will now be more willing to part at an early stage, and that at a price, it should be noted, which must bear some relation to the taxing valuation. In any case, the means are open to him to calculate for himself from the valuation rolls whether it is worth his while to lease at the prices fixed, and this in itself will both increase his area of choice and save fruitless inquiries.

JOHN F. MCILWRAITH, F.S.I.

HERNE-HILL CHURCH EXTENSION.—In connexion with the scheme for the extension of the work of St. Paul's, Herne Hill, the new parochial hall, built from the designs of Messrs. Greenaway & Newbury, has been opened, and for the present is to be used as a temporary church. It is hoped to shortly commence the proposed new church and vicarage.

MIDDLESEX COUNTY COUNCIL.

At the meeting of the Middlesex County Council on May 27 several important matters were decided. The Committee in charge of the Napsbury Asylum brought up a report embodying particulars of the working drawings of Mr. Rowland Plumbe of the proposed extension, which includes accommodation for 582 additional beds distributed as follows:—Conversion of two villas for 104 female working patients into a villa block for 174 male patients, of whom twenty-five are to be accommodated in single rooms. On the female side there are three-story blocks with 360 beds, and in addition forty-eight single rooms. Mr. Plumbe, in his remarks, says that in view of the somewhat different nature of the buildings, and the necessity of the strictest economy in capital outlay, a simplified form of construction is adopted, consisting of reinforced concrete floors and flat roofs, instead of timber construction in floors and roofs adopted in the two-story blocks of the existing building; the rapid advances in the scientific use of reinforced concrete enabled him to do this with much advantage, thus gaining the advantage of the most fire-resisting form of construction at present known, together with economy. The floor surfaces in the living-rooms upon the ground floor will be in deal boards in narrow widths. On the upper floors they will be finished in cement with the intention of their being covered with thick linoleum fastened down all round. This forms the most sanitary and best floor at present known. The corridors and sculleries, sink-rooms, lavatories, etc., will be floored with granolithic paving, and the bathrooms with terrano paving. The walls of the corridors of communication, the sanitary spurs, larders, stairs, and stores are faced with a hard, fine-surfaced, pressed brick for future painting. The walls of the dayrooms, dormitories, single-rooms, attendants' rooms, and sculleries are plastered with Sirapite. The remaining details of construction and sanitary and other fittings will follow the main asylum, but they will be much modified and simplified in character. The water suply and drainage will consist of an extension of the present system carried out upon the same lines, with necessary modifications of the existing drainage. With regard to the heating and hot water, it is not intended to increase the large number of thermo-regulated heaters, but to provide for the whole of the extensions a central heating system, with a forced system of circulation of low-pressure hot water, the whole controlled from the engine-room and designed to be as far as practicable worked with the exhaust steam from the engines. He estimated the total cost of the extensions at 65,475*l.*, or at the rate of 112*l.* 10s. per bed. He felt bound to point out that the Commissioners, in insisting upon the lowering of the cost of the building to this amount, had taken into full consideration the fact that the present time was favourable for getting low estimates; at the same time the reduction of cost from 150*l.* per bed to 112*l.* 10s. can only be achieved by the omission of very many of the valuable advantages in the present buildings, such as all glazed brickwork, mosaic paving, and other things, all of which tend to economy in upkeep. With a view to taking the fullest advantage of the low prices now ruling in the building trade, Mr. Plumbe states that it would be desirable to get the work forward and put to tender as early as possible. The Council passed the working drawings, and, subject to the approval of them by the Secretary of State, the Committee were authorised to arrange for the taking out of the quantities and to invite tenders for carrying out the work from not less than twenty contractors approved of by the Committee. The security to be given by the contractor will consist of a bond of 1,000*l.*, with two sureties of 500*l.* each. The contractor is to be paid on account 80 per cent. of the value of the work executed, until the retention money amounts to 5,000*l.*, and then the full value of the work executed from time to time. The Committee in charge of the Guildhall extension reported that they are in negotiation with the Ecclesiastical Commissioners and the Surveyors' Institution with regard to a strip of land in Princes-mews, required for the purpose of a new street, and land which is to be exchanged for the surplus piece of land belonging to the County Council adjoining the Surveyors' Institution. In view of the fact that the present building belonging to the Surveyors' Institution is practically a new one, that body cannot see its way to agree to the condition of the County Council, that buildings should be erected to the new building line on the north side of the new street within three and a half years from July 27, 1908. The Committee, therefore, have caused an application to be made to the London County Council for the removal of this condition, as regards the north side of the proposed new street. The report was agreed to. A Joint Committee of the County Councils of Middlesex and Surrey as to Kingston Bridge brought up a report, recommending that these County Councils were prepared to enter into an agreement to authorise the necessary steps to be taken for the promotion of a Bill in Parliament for transferring Kingston Bridge to the County Councils, and to authorise its widening or its reconstruction and widening to a width of 55 ft. between the parapets. They further recommended that the Committee be authorised to engage the services of a bridge engineer at a fee of 200 guineas. After a discussion, in the course of which a strong opinion was expressed against the bridge being reconstructed, the recommendation to engage the services of a bridge engineer was negatived, and the first recommendation was altered by the deletion of the reference to reconstruction. In this form —*i.e.*, that the Councils be authorised to widen the bridge to a width of 55 ft.—the recommendation was passed. The County Council's Engineer and Surveyor was authorised to take the necessary steps to fill in a portion of the pond opposite the "Red House," Great Stanmore, and to provide a drain and reform the road, at a total estimated cost of 500*l.* In connexion with small holdings and allotments, a cottage is to be erected at Mayfield Farm, Bedfont, at a cost of 250*l.* The Education Committee has been authorised to obtain tenders for additional heating to the Ealing-road Council School, Brentford.

PROJECTED NEW BUILDINGS IN THE PROVINCES.

ANTRIM (County).—School, Ballymena. Mr. J. Hauna, architect, Ocean-buildings, Belfast.

Barking.—The Urban District Council has passed the following plans:—Additions to twenty-five houses, Bifrons-street, Messrs. T. Young & Sons; three houses, Fisher-street, Mr. R. H. Carter; twelve houses, Eastbury-avenue, Mr. J. Graffy.

Belfast.—Warehouse, Waring-street, Messrs. J. & R. Thompson, architects, Waring-street, Belfast; additions to Purdysburn Asylum (60,000*l.*), Messrs. Watt & Tullick, architects, 77A, Victoria-street, Belfast, Messrs. Currey & Co., Ltd., builders, Belfast; residence, University-square (1,000*l.*), Mr. W. Fennell, architect, Scottish-buildings, Belfast; block of offices, Mr. S. Stephenson, 83, Royal-avenue, Belfast; Messrs. McLaughlin & Harvey, builders, Belfast; additions, Northern Weaving Company's premises, Mr. S. Stephenson, architect, 83, Royal-avenue, Belfast, Mr. J. Miskemman, builder.

Burnley.—Skating-rink. Mr. C. Riley, architect, Hargreaves-street, Burnley.

Chatham.—Residence for Dr. Packman. Mr. H. Dunstall, architect, Railway-road, Chatham.

Cogenhoe (Northants).—Church. Mr. H. Dyer, architect, 13, Sheep-street, Northampton.

Congleton.—Hall (1,600*l.*). Mr. A. C. Thomson, architect, Wellington-chambers, Ayr.

Cowdenbeath.—Club pavilion. Mr. J. F. Anderson, architect, North-road, Cowdenbeath.

Dudley.—The Town Council have passed the following plans:—Two houses, Double-row, Netherton, Mr. John Harris; showroom, Queen's Cross, Mr. R. L. Jones; additional buildings to the Police Cottage, Messrs. Jakeman & Round, builders, Dudley.

East Cowton.—Church. Messrs. Woodfall & Eccles, architects, 60, Castle-street, Liverpool; Mr. T. Bond, builder, Bank Top, Burnley.

Ellesmere Port.—Police-station. Mr. H. Beswick, architect, Newgate, Chester.

Farsley.—Extension to worsted mills. Mr. W. Gill, architect, care of R. Gaunt & Sons, Ltd., Farsley, Leeds.

Friern Barnet.—School, Holly Park (4,888*l.*). Messrs. Mattock Brothers, builders, Winkfield-road, Wood Green, N.

Glenapp (Ayr).—Church (1,200*l.*). Mr. P. M. Chambers, architect, 95, Bath-street, Glasgow.

Gourock.—Skating-rink (2,000*l.*). Secretary, Gourock Entertainments, Ltd., Pier Head, Gourock, N.B.

Hounslow.—The District Council has passed the following plans:—Two houses, Standard-road, Hounslow, Mr. F. Oaklev three houses, Clare-road, Hounslow, Mr. E. W. Button; conversion of stable into schoolroom, Osterley-road, Spring-grove, Messrs. Holliday & Greenwood; motor-house, Dusch House, Isleworth, Messrs. Brewer, Smith, & Brewer; two pairs, semi-detached villas, Kilmorey-gardens, St. Margaret's, Mr. H. Langford Moyle.

Ilford.—Shops, Ilford-lane. Mr. A. W. Hudson, architect, 87, Finsbury-pavement, E.C. The Urban District Council has passed the following plans:—Ten houses, Quebec-road, Messrs. B. Bailey & Co., for Mr. F. B. Harrison; two houses, Glencoe-avenue, Mr. F. W. Hitchcock; four houses, Felbrigge-road, Mr. E. Dunn, for Mr. J. Pettigrew; ten houses, Cowley-road, Mr. G. B. Durston; ten houses, Arundel-gardens, Messrs. Rawlins, Culver, & Rylands; additions to workroom at Ilford Collar Works, Mr. F. French, for Mr. H. R. Denne; nine houses, South Park-parade, Green-lane, Mr. A. Thomerson; four houses, Kinfauns-road, Mr. E. Dunn; twelve houses, Arundel-gardens, Messrs. Rawlins, Culver, & Rylands; four houses, Aldborough-road, Mr. G. T. Genever; proposed tea-room rear of lock-up shop, High-road, Seven Kings, Messrs. Rawlins, Culver, & Rylands.

Ilminster.—Mills. Messrs. Symes & Madge, architects, Chard, Somerset.

Leyton.—The Urban District Council has passed the following plans:—Alterations to Nos. 521 and 523, High-road, Mr. E. A. Russell; four houses, Forest-road, Mr. A. Radcliffe; skating-rink, Kirkdale-road, Mr. R. Cornish.

Lisburn.—Factory, Hill Hall. Mr. W. J. Fennell, architect, Scottish-buildings, Belfast.

Margate.—Dust destructor. Mr. H. A. Borg, architect, Town Hall, Margate.

Newcastle.—Rebuilding 5 and 6, Eldon-square. Messrs. Graham & Hill, architect, 133, Pilgrim-street, Newcastle.

North Shields.—Concert-hall. Mr. J. Meadows, architect, Howard-street, North Shields.

Platt Bridge.—Institute (2,000*l.*). Mr. J. Thornley, architect, 45, Market-street, Darwen; Messrs. Clough & Gaskell, builders, Wigan.

Port Glasgow.—Station buildings. Mr. D. Matheson, architect, Caledonian Railway Offices, Buchanan-street, Glasgow.

Southampton.—The Town Council has passed the following plans:—Four houses, Oakhurst-road, Messrs. Weston & Burnett; two houses, Lumsden-avenue, Messrs. Jurd & Sanders; three houses, Welbeck-avenue, Mr. A. W. Bricknell; additions, boat-houses, Priory-avenue, Mr. E. Soper; four houses, Wilton-road, Mr. J. L. Bennett; four houses, Winchester-road, Mr. H. Dominey.

South Shields.—Y.M.C.A. premises. Mr. J. Morton, architect, King-street, South Shields; Messrs. Allison & Sons, builders, South Shields.

Stewarton (N.B.).—Mansion. Messrs. H. & S. Clifford, architect, 225, St. Vincent-street, Glasgow.

Sutton.—The Urban District Council has passed the following plans:—Additions to Brambleacres, Worcester-road, Mr. A. W. Bawtree; shop-front and lock-up shop, Linden-villas, Benhill-street. Mr. J. Trott.

Tregave (Mon.).—Residence. Mr. E. Davies, architect, Wildmarsh-street, Hereford; Messrs. Hall & Harding, builders, Monmouth.

Walthamstow.—The Urban District Council has passed the following plans:—Four houses, Beech Hall-road; warehouse, Handsworth-avenue; seven shops, Hale End-road; and one house, The Avenue, Mr. O. H. Watling.

Warrington.—Skating-rink. Messrs. Garnett & Wright, architects, 45, Sankey-street, Warrington.

West Hartlepool.—New block, Henry Smith School (12,000*l.*). Mr. J. Garry, architect, 47, Church-street, West Hartlepool.

Wrexham.—Private school (3,700*l.*). Mr. J. G Burrell, Market-place, Durham.

WESTMINSTER CITY COUNCIL.

AT the fortnightly sitting of the Westminster City Council the following matters were dealt with:—

Property in Beak-street.—A communication had been received from the Board of Education stating they they proposed to authorise the granting of a building lease of certain property belonging to Reeves Foundation, which has an area of 4,866 sq. ft. on the west side of Bridle-lane and south side of Beak-street. The lease will be for ninety-nine years, and the lessee agrees to expend not less than 10,000*l.* in building.—It was agreed to offer no objection.

Drainage.—A report was presented on the subject of the provision of means of drainage for new premises proposed to be erected on a site abutting on Vauxhall Bridge Approach-road, for the Hovis Bread Flour Company, Ltd. It was decided that, subject to the premises being erected, a 9-in. pipe sewer be constructed on the south side of Vauxhall Bridge Approach-road, from the County Council sewer in Grosvenor-road to within 100 ft. of the proposed premises.

Royal Automobile Club Premises.—It was decided to agree to the exchange of land on the south side of Pall Mall to allow of the erection of a building for the Royal Automobile Club. By the transaction 106 ft. 6 in. super. of land will be thrown into the public way, whilst 18 ft. super. will be taken from the public way.

Annual Paving Works.—It was decided to fix the following dates for the commencement of the carrying out of annual paving works:—Artillery-row, July 5; Belgrave-square, August 9; Berkeley-street, August 23; Bow-street, August 30; Brick-street, October 4; Buckingham-gate, August 9; Carey-street, July 19; Carlos-place, August 2; Gillingham-street, October 4; Leicester-square (west side),

August 2; Nassau-street, July 5; St. James's-square (north half), August 2; Soho-square (west side), July 5; Upper Belgrave-street, August 30; Wardour-street, July 19; West Halkin-street, September 27; York-street, August 30.

Queen Anne's-gate Widening.—The Improvements Committee reported having again considered the advisability of widening the roadway of Queen Anne's-gate leading to Birdcage-walk, but were still of opinion that a widening of the thoroughfare was not desirable, particularly having regard to the comparatively steep gradient of the street, and to the fact that any increased traffic would tend to affect the amenities and destroy the character of the neighbourhood.—Capt. Jessell moved that the report be referred back, but the amendment was defeated, and the recommendation to take no action in the matter carried.

THE HOUSING AND TOWN PLANNING BILL.

At the meeting of the Greenwich Borough Council on May 26 the General Purposes Committee reported that in November last the Council passed a resolution embodying objections to some of the principal clauses of the Housing and Town Planning Bill. The measure has been reintroduced this session, and the features to which the Council took exception last year appear to be included, together with some new provisions which called for observation. By sect. 14 it is provided that a contract for letting a house for habitation by persons of the working class shall imply a condition that it is reasonably fit for human habitation, and sect. 15 imposes upon the landlord a condition that it shall be kept so during the tenancy. As 40*l.* per annum is fixed as the maximum rent of houses falling within this condition, the Committee, whilst hesitating to recommend opposition to any provisions that would tend to promote healthy conditions, are of opinion that this high annual value is calculated to render the provision unreasonable and unworkable. Sect. 16 establishes a new definition of rooms which shall be deemed to be unfit for human habitation, and the provisions of the Bill enabling four inhabitant householders to cast upon the local authorities the expense of an inquiry into the housing policy of the Council (to which exception was taken in November last) is retained in the Bill as redrafted. With reference to the provisions made as to the closing and removal of insanitary dwellings, the Committee consider that regard should be had to the danger of the object being defeated by discouraging persons with capital to lose from investing it in the purchase or erection of working-class dwellings. The Bill also contains a provision that the sanitary authority shall in every period of five years make a complete inspection and survey of every dwelling-house, registering not only the situation with the number and description of rooms in each house, but the number of occupants, their sex, and approximate age, state of repair, and, if let in lodgings, the number of rooms and of lodgers, so that a complete register may exist of every house in the borough. This would no doubt for many purposes prove a very useful register if it could be kept up to date, but it is to be observed that there are over 14,000 dwelling-houses in the borough of Greenwich, and that such a register could not be compiled by the present staff of sanitary inspectors, and would involve great expense, while it is obvious that if the register is to occupy five years in preparation, the particulars registered at the beginning of that period would be of absolutely no value, and entirely misleading as the latter end of the period approached. The town planning provisions remain much the same as in the Bill introduced last year, making the London County Council the authority to put forward a scheme for town planning. There appear also to be many points of detail upon which objection might be raised against the Bill, and it is to be observed that its possible effect is difficult to estimate, owing to its being largely drawn upon the plan of legislation by reference, and to very large and indefinite powers being given to the Local Government Board upon a subject, viz., town planning, which is believed to be practically new to the statute-book, and which is not clearly defined by the Bill. Further, there are various provisions which would have the effect of taking away from owners who might be prejudicially affected by a scheme, the protection which they now have of appeal to Parliament or the courts of law with regard to the validity of the scheme. The Committee are of opinion that whilst probably more carefully considered legislation generally upon the lines of the Bill might be desirable, the Bill as at present drawn is open to objection for the reasons (*inter alia*) stated above. The Committee submitted recommendations embodying the foregoing objections, and these recommendations were carried. Copies of the resolution are to be forwarded to the President of the Local Government Board, the local Member of Parliament, and the other Members of Parliament for London.

LONDON AND DISTRICT BOROUGH COUNCILS.

Battersea.—The Council have passed plans lodged by Mr. J. P. Russell for the erection of projecting shops to Nos. 73 and 75, Lavender-hill.

Bermondsey.—The Council have passed plans for building a painting shop and stores in Riley-street for Messrs. H. Grant & Co.; the builders are Messrs. W. H. Fryer & Co., Bravington-road, Paddington, W.

East Ham.—The Local Government Board have provisionally approved of the plans of the proposed public mortuary to be erected at the rear of the Town Hall. The engineer of the London and Tilbury and Southend Railway has informed the Council that the drawings for the reconstruction of the bridge over the railway in High-street North are completed. As the diversion and duplication of the sewer over the bridge must be commenced before the work of reconstructing the bridge is started, the Local Government Board are to be asked for their provisional consent to allow the Council to proceed with this. The Engineer has been authorised to take in hand the making-up of Trevelyan-avenue, Dore-avenue, and Brancaster-road. The following building plans have been lodged:—Messrs. T. H. & J. E. Reid, sixteen houses, Hatherley-gardens; Mr. J. Byford, six houses and shops, High-street North; Mr. H. A. Chillingworth, five houses, Hatherley-gardens.

Greenwich.—Tenders are to be invited from local tradesmen for carrying out decorative repairs at the Town Hall, in accordance with a specification and scheme prepared by Mr. Alfred Roberts. Messrs. Pasterfield & English, whose tenders for the erection of depôt buildings at Norman Wharf were recently accepted, wrote that owing to a clerical error their tender for the stable block was 1,298*l.* instead of 1,498*l.* Messrs. Frederick Deakin & Son, of Addlestone, Surrey, were the next lowest tenderers, and their quotation was accepted at the meeting on May 26 at 1,295*l.* and 71*l.* 13s. A plan was received by the Council from the Port of London authority in connexion with a proposal by the owners of the land to pile and form a wharf on the site of Ballast Quay, Charlton. It was resolved to offer no objection to the proposals subject to the protection of the Council's rights. Charlton-road is to be repaired with tar macadam and rag and flint at an estimated cost of 1,150*l.*, and Shooter's Hill-road is to be repaired with tar macadam at an estimated cost of 1,139*l.* Tenders are to be invited for forming and paving a portion of Bramshot-avenue. The Town Clerk and the Borough Engineer have been instructed that in the discussion of preliminaries for the making of an agreement with the London County Council in connexion with the tramway electrification east of Rainton-road, it must be made a condition precedent that the widening near the Lombard Wall schools and also at Charlton-lane shall be on the north side of the road only. The Council has approved the following building applications:—Three houses, Straightsmouth, Mr. A. Roberts; four houses, Kinveachy-gardens, Mr. T. Charon; five houses, Westcombe-hill, Mr. H. Saywood; twenty houses, Troughton-road, Mr. A. Abbott.

Hammersmith.—Two hundred and fifty-nine public lamps in fifty-five streets are to be changed from gas to electricity, at an estimated cost of 1,535*l.* Messrs. Fraser & Chalmers are to supply, at 660*l.*, a coal conveyor and projector for the generating-station. Dunraven-road and part of Uxbridge-road are to be made up and paved. Mr. T. Watson having withdrawn his accepted tender, at 300*l.*, for paving Old Oak-road, the work is to be carried out by Messrs. G. Wimpey & Co., at 379*l.* The final accounts for the erection of the baths and washhouses show that the total expenditure on the work was 52,717*l.*, or 7,717*l.* in excess of the amount of the accepted tender; 4,511*l.* of this excess was due to alterations in the foundation, and 422*l.* to the use of cement mortar instead of lime mortar, and which alteration was chiefly by reason of the same cause. An extra 988*l.* was spent to enable the Council to secure a music and dancing licence for the building, while an extra 1,094*l.* was caused by the rise in the market price of materials. The Committee report that they are satisfied that due care was exercised in avoiding unnecessary additional expenses, and that the extra expenditure was, having regard to the magnitude of the works, reasonable, and had been properly incurred.

Lambeth.—The Town Clerk has been instructed to write to the Duchy of Cornwall drawing attention to the state of dilapidation, etc., into which houses in Marsh Ward are falling, and suggesting that the Duchy should take steps forthwith to close such houses and to board them up. The Duchy is also to be informed that the local authority approve, on general lines, of the improvements that the Duchy are gradually making within the area. 75*l.* is to be paid to Messrs. Lapthorne & Co., the contractors for carrying out the improvements at the High-street mortuary, in settlement of their claim of 149*l.* in consideration of the additional expense to which they were put on account of the delay in the carrying out of their work. It appears that the contractors' men were stopped from working during days or parts of days by the coroner's orders. Riverhall-street and Thorne-street are to be paved with redressed granite setts, at a cost of 330*l.* The Council has passed the following building plans:—Mr. A. Cole, coal office, Rosendale-road; Mr. G. Hitchings, six houses, Tulsemere-road, West Norwood.

Poplar.—The Council has approved plans lodged by Messrs. Sheffield Brothers for the building and drainage of offices at Messrs. Matthew T. Shaw's premises, 306, West Ferry-road.

West Ham.—The following building plans have been lodged:—Messrs. F. Boreham & Son, new works and offices at the Standard Alloy Company's premises, Manor-road; Mr. W. Batt, timber-shed, Fremason's-road, Custom House; Mr. T. H. Pike, cinematograph exhibition and music-hall, Barking-road.

Willesden.—It is proposed to erect fire-brigade premises at Harlesden-road, at a cost of 1,365*l.* Messrs. Northcroft, Neighbour, & Nicholson are to be engaged to prepare quantities for the main intercepting sewer from the recreation-ground at Stonebridge to Kilburn-lane. Having regard to the importance of deciding the method of measuring the sewage passing into the London sewers, the Engineer is to be authorised to obtain the co-operation of Sir Alexander Binnie, should it be found necessary, during the negotiations with the London County Council. Tenders are to be invited for the making-up of four roads. The Works Committee have had under consideration a report by the Engineer upon the comparative merits and prices of British and Foreign granites for kerbing and channelling. To encourage native industries as far as possible the Engineer is to be instructed to obtain samples of various descriptions of British granite for inspection. The Engineer is to prepare an estimate for providing accommodation for twenty additional beds and the necessary staff at the hospital. 3,050*l.* is to be spent in laying an additional cable between Dollis Hill-lane and Melrose-avenue, and an extension thereof from Melrose-avenue to the substation in Salisbury-road.

Wimbledon.—The Town Council has passed the following plans:—Two pairs dwelling-houses, Melbury-gardens, Messrs. Thomson & Pomeroy; alterations and additions to "Glenafton," Church-road, Mr. J. C. Walker; coal store and covered way, Merton Hall-road, Messrs. P. H. Clarke & Son; motor-house and store at "Wilcuma," Arthur-road, Mr. E. H. Underwood; storehouse rear of 16, Lambton-road, Messrs. Murray & Co.; mess-room and stables in connexion with laundry, York-road, Messrs. Humphreys & Son.

Obituary.

MR. READE.

We regret to announce the death, on May 26, at his residence, Park Corner, Blundellsands, near Liverpool, of Mr. Thomas Mellard Reade, F.G.S., A.M.Inst.C.E., aged 77 years, senior partner of the firm of Messrs. T. Mellard Reade & Son, of Liverpool. Mr. Reade was elected a Fellow of the Royal Institute of British Architects in 1878, and was a past member of Council; he was elected President of the Liverpool Architectural Society for the sessions 1889-91. Having passed his pupilage with two architects in his native city of Liverpool, he entered the engineering works of the London and North-Western Railway Company at Warrington, and became a principal draughtsman. He then, just fifty years ago, set up in practice as an architect and engineer in Liverpool. As architect to the School Board he erected many educational and similar buildings in the city, amongst them being the Pupil Teachers' College in Clarence-street, opened in July, 1898, at a cost in excess of 17,000*l.*, and the day industrial schools in Addison and Sawney-Pope streets, Marybone, 1890-1. For the Education Committee of the City Council, who succeeded the School Board seven years ago, he erected the Council schools for 1,170 children in Tiber-street, with gymnasium, baths, etc., in Tagus-street, the designs being after the Renaissance manner, and the

Edge Hill Training College. He was the architect also of the Board school at Seacombe, Cheshire; the Birkenhead Institute, to which he made additions for the science department in 1901-2; and the Cottage Home for Children, with isolation ward, at Blundellsands, completed a few months since. Mr. Reade's services as an assessor were frequently engaged—he acted in that capacity in the matter of the Brougham-terrace, West Hartlepool, Board School for 1,450 children, the higher grade school for the Carlisle School Board, and the Hyndburn Park school, for 1,050 children, for Accrington Education Committee. Mr. Reade was elected a Fellow in 1872 of the Geological Society, who, in 1896, awarded to him the Murchison Medal; he was President of the Liverpool Geological Society. In 1886 he brought out a work entitled "Origin of Mountain Ranges," which he republished in an amplified form in 1904 under the title of "The Evolution of Earth Structure, with a Theory of Geomorphic Changes," reviewed in our columns of June 4, 1904; he wrote several scientifical treatises and papers, and contributed articles upon "The Chalk Masses, or Boulders in the Contorted Drift at Cromer," and "The Drift of the North-West of England," to the *Journal*, 1874-83, of the Geological Society.

General Building News.

PROPOSED PRIMITIVE METHODIST CHURCH AND SCHOOLS, GATESHEAD.

A site for the erection of a church and Sunday-schools has been secured by the Gateshead Circuit Primitive Methodists at Joicey-road, Gateshead Fell. Messrs. Marshall & Tweedy, Newcastle, are the architects, and Mr. R. Stephenson, Low Fell, builder. The scheme is estimated to cost 5,500*l.*

ST. PETER'S, CRANLEY-GARDENS.

On May 24 the Bishop of London consecrated the new chapel of the Holy Spirit in the church of St. Peter, Cranley-gardens. The chapel contains a reredos in carved Bath stone consisting of a representation of the Crucifixion. That part of the floor on which chairs will be placed is of oak blocks, but the whole of the rest is laid in marble or marble mosaic, after the manner of the old Cosmati work of the XIIth century. The six steps are of Lunel (two), St. Just, white statuary, grand antique, and *rosso antico*, and altogether over thirty kinds of marble are employed on the pavement. There are four windows filled with stained glass by Messrs. Powell, of Whitefriars Glass Works, E.C. The architect is Mr. W. D. Caröe, and Messrs. Collins & Godfrey, of Tewkesbury, were the contractors.

WESLEYAN CHURCH, WALLASEY, LIVERPOOL.

A new Wesleyan church is being built on a site in Claremont-road, Wallasey. The building, which will be erected of Helsby stone, will, when completed, cost 9,300*l.*, and will provide seating accommodation for 750. In addition, Sunday-school premises for 300 scholars will be included in the scheme. The architect of the church is Mr. Stanley Ellison, Mr. Edmund Ware acting as quantity surveyor. Messrs. George Parker & Sons are the contractors.

COUNCIL SCHOOL, MAIDSTONE.

The Maidstone Town Council are building a new school on a site of 1½ acres which they have secured in Union-street. The school is designed to accommodate 1,056 children, divided into junior and senior mixed departments, with suitable rooms for handicrafts, laundry work, and cookery. It will consist of two floors, the upper for the senior scholars, and the ground floor for the juniors. The cost of the building will be 13,339*l.*, or 12*l.* 12*s.* 7*d.* per child accommodated, the cost of site (2,860*l.*) and of furnishing and equipping the school bringing the total expense to 18,232*l.* The plans have been prepared by Mr. Bunting, the Borough Surveyor, and Mr. W. T. Burrows, builder, secured the contract.

PROPOSED NEW BUILDINGS IN LONDON AND SUBURBS.

Italian Hospital, Bloomsbury, Messrs. Browett & Taylor, architects, 9, Warwick-court, W.C.; rebuilding Crown and Anchor Hotel, Bethnal Green, Mr. W. J. Maddison, builder, Canning Town; new offices, Queen's-square, W.C.; Messrs. Chinchen & Co., builders, Harrow-road, N.W.; row of shops, Deptford, S.E., Mr. E. Cammel, architect, 26, Bush-lane, E.C.; factory, City-road, E.C., Messrs. Chambers & Son, architects, 11A, College-hill, E.C.; shops, West End-lane, N.W., Architect, L. & N.W. Railway, Euston; block of offices, Salisbury-square, E.C. (20,000*l.*), Mr. F. W. Foster, architect, 41, Bedford-row, W.C.; mission hall, New Cross, S.E., Mr. J. Waterworth, architect, 385, New Cross-road, S.E.; additions to St. Anne's Church, Custom House, E., Mr. R. L. Curtis, architect, 11 and 12, Finsbury-square, E.C.; additions, St. Mary's Church, Rotherhithe, Mr. C. E. Sayer, architect, 17, Soho-square, W.

NEW POST-OFFICE, ARGENTINE REPUBLIC.

The *Boletin Oficial* of April 23 publishes a decree, issued by the Ministry of Public Works, approving the plans submitted by the architect, Mr. Norbert Maillard, for the construction of a Central Posts and Telegraphs Office, at an estimated cost of 9,881,632 pesos (about 905,800*l.*). The Dirección General de Arquitectura are accordingly authorised to invite tenders within two months for the carrying out of the work. Complete plans and specifications may be obtained from the above-mentioned Dirección on payment of 50 pesos (4*l.* 11*s.* 8*d.*) per copy. —*Board of Trade Journal.*

PUBLIC HALL, KELTY, N.B.

A public hall is to be built by the Kelty Public House Society. Messrs. Andrew Scobie & Son, Dunfermline, are the architects. The hall will accommodate about 1,300 people, and will involve an expenditure of about 4,000*l.*

NEW POST-OFFICE, INVERURIE.

The new post-office at Inverurie is now opened. The building is situated in West High-street, opposite Constitution-street, and, in addition to the post-office, consists of a double shop with house accommodation above. The plans were prepared by Mr. G. Bennett Mitchell, architect, Aberdeen.

PAROCHIAL HALL, MANSFIELD.

A parochial hall is being built to serve the needs of St. Mark's parish, Mansfield. The building will consist of a central hall, which will accommodate 250 people, and a classroom will seat an additional 100. There will also be two smaller classrooms, a couple of cloakrooms, and the usual offices. The cost will be 1,500*l.* Mr. Temple Moore is the architect, and the builders are Messrs. Vallance & Blythe.

MUSIC-HALL, HUDDERSFIELD.

A new music-hall is being built at Huddersfield from the designs of Messrs. R. Horsfall & Son, Halifax. The building is destined to seat about 1,600, and is costing 12,000*l.*, exclusive of site.

ENLARGEMENT OF INSTITUTE PREMISES, ROTHBURY.

The members of the Rothbury Mechanics' Institute and Reading-room are considering a scheme to enlarge the present Jubilee Hall. Plans for the proposed work have been prepared by Mr. C. Franklin Murphy, C.E., of Morpeth.

TRADE NEWS.

THE Home Secretary has approved of the acceptance by the Essex County Council of the scheme and tender of Messrs. Dargue, Griffiths, & Co., Ltd., of Liverpool, London, and Manchester, for the engineering plant at the Essex Second County Asylum, Colchester, including boilers, pumps, warming, ventilating, hydrants, etc. The contract is being carried out in sections, the first of which, amounting to 20,000*l.*, is now going on. The system adopted is the "D. G. Economic Centralised." With this system the whole plant is fixed at one point under the direct and immediate supervision of the engineer in charge, all exhaust steam, instead of going to atmosphere and being wasted, is utilised, while the condensed water, at practically boiling-point, is returned to the boilers, thus nothing is wasted, while the highest possible degree of efficiency is attained. It is claimed that with such a system the full value is got out of the fuel. The arrangement of the scheme is on similar lines to those installed by the same firm at King Edward VII. Sanatorium, Midhurst; Royal Infirmary, Manchester; Camberwell Infirmary, London, etc. The architects are Mr. Frank Whitmore, County Architect, and Mr. W. H. Town, Chelmsford.

Part of Leather-lane is to be paved by the Val de Travers Asphalte Paving Company, Ltd., at 9*s.* per yard super., and the west side of Lincoln's Inn-fields is to be paved with tar slag macadam by Messrs. W. Shepherd & Sons, at 3*s.* 3*d.* per yard super.

Fluxite soldering paste has been included in each of the field equipment boxes of the sappers and miners in the Indian Army Service Companies. Its adoption in this service, after competitive tests of various fluxes, is an important testimony in its favour.

The New Zealand Government have accepted the tender of Mr. Percy Pitman (Acton) for hydraulic governors for regulating the speed of two 80-b.h.p. Pelton wheels, which are used for driving stone-crushing plant at the Mount Egmont branch railway, New Zealand.

The extensions to the Technical Schools, Warrington, are being ventilated by means of Shorland's patent exhaust roof and special inlet ventilators, supplied by Messrs. E. H. Shorland & Brother, of Manchester.

Appointments.

LONDON COUNTY COUNCIL EXAMINERS.

The following gentlemen have been appointed on the London County Council panel of examiners formed in connexion with scholarships, etc.:—Building construction, Mr. A. Randall Wells, A.R.I.B.A.; casting and moulding for engineers, Mr. F. Boulden, A.M.I.C.E.; land surveying, Mr. W. R. B. Wiseman, M.Sc.; sanitary engineering, Mr. G. Smith, A.S.I.; mechanics and mechanical engineering, Messrs. F. Boulden, D. J. Richards, B.A., and W. W. F. Pullen, A.M.I.C.E.

NORTHAMPTON.

The Northamptonshire Education Committee have appointed Mr. A. G. Lynham, of Bristol, as assistant to the Education Surveyor. The number of applicants was 588.

Miscellaneous.

PROFESSIONAL AND BUSINESS ANNOUNCEMENT.

Mr. Cecil R. Pinsent and Mr. Hugh Townshend Morgan, architects, have removed from 29, Great George-street to 37, Berners-street, W.

PROPOSED STREET IMPROVEMENTS, MANSFIELD.

An inquiry was held at Mansfield recently by Mr. E. Dudley, F.S.I., Inspector to the Local Government Board, into the application of the Mansfield Corporation to borrow 6,600*l.* for the purchase of property in Albert-street, Mansfield, for the purposes of widening the road. The Town Clerk explained that at present Albert-street was a very narrow thoroughfare, the width at the proposed widening varying from 27 ft. 2 in. to 28 ft. 9 in. It was proposed to widen the road to 40 ft. The Borough Surveyor (Mr. T. R. Collinge) was present at the inquiry.

BEDFORD COLLEGE.

As was reported in the *Builder* last week, the London County Council Education Committee recommended a grant of 20,000*l.* to the Bedford College. The college authorities, it now appears, propose to erect a new building which is estimated to cost 100,000*l.* The college at present occupies the lease of certain premises in York-place, Baker-street, but in view of the desirability of establishing the college in a permanent building, the council of the college has purchased the lease of a site of 8 acres in Regent's-park.

THE SANITARY INSPECTORS' EXAMINATION BOARD.

The following is a list of the candidates who passed in the examination for sanitary inspectors under the Public Health (London) Act, 1891, held in London in May, 1909, with the names of the institutions at which the candidates received instruction:—The Royal Sanitary Institute—Miss Floyd Bowen, Mr. Henry H. Clay, Mr. Arthur B. Cruttenden, Miss Edith Day, Mr. Matthew E. Duncan, Mr. Harold Nelson Jones, Mr. Alfred Moon, Miss Dorothy M. Newhall, Miss Florence Petty, Mrs. Jessie E. Parsons, Mr. Sidney Reyner, Miss Eleanor Richardson, Miss Maud M. Webster. The National Health Society—Miss Christina M. Graham, Miss Ethel K. Houghton, Miss Dorothy de Jersey Le Lacheur, Miss May M. Le Lacheur, Miss Maud Roche, Miss Winifred N. Stark, Miss Dora Spong, Miss Annie M. Williams. Bedford College—Miss Mabel Rintoul, Miss Edith V. Rintoul, Miss Christiana G. Wilkinson. King's College—Mr. William Billings, Mr. Charles John Dee, Mr. Rees Griffith, Miss Madeleine John, Mr. Ernest T. Thompson. In Office—Mrs Annie Hunter, Miss Alice E. Hall, Mr. Thomas A. Cartledge.

THE ILLUMINATING ENGINEERING SOCIETY.

At an inaugural dinner, held on February 9 of this year, it was decided to form an Illuminating Engineering Society, having for its object the study of the science and art of illumination in this country. An Executive Committee was appointed on this occasion to consider the drafting of the constitution of the Society, etc., and this Committee has now reported at a meeting of the supporters of the Society, held at St. Bride Foundation Institute on May 25, Mr. Chas. Hastings being in the chair. The constitution and by-laws drafted by the Committee were formally ratified by those present, and the Executive Committee, forming the nucleus of the first Council of the Society, were reappointed with the power of adding to their number as might be expedient. It was also agreed that the Council should be free to elect as members any who intimated their desire to become members of the Society, and were duly proposed and seconded in the prescribed manner, without the

MISCELLANEOUS—*Continued on page 689.*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this Number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xviii.; Auction Sales, xxx.

Certain conditions, beyond those given in the following information, are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bonâ-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

Competitions.

JUNE 7.—**Athy.**—HOUSING.—Athy U.D.C. offer a prize of 5*l.* 5s. for the best plans, of three different kinds of houses, suitable to the town, for labourers, artisans, etc., at a cost of about 100*l.*, 150*l.*, and 200*l.* each, to be built in rows or streets, the Council to be the judge as to which plans are the best. Mr. J. A. Lawler, Clerk of the Council, Town Hall, Athy, Ireland.

JUNE 15.—**Reading.**—OFFICES.—The Berkshire C.C. invite competitive designs for proposed new offices, committee-rooms, etc., at the Fosbury, Reading. Premiums of 100*l.*, 75*l.*, and 50*l.* Particulars from Mr. J. Fred. Hawkins, County Surveyor, Bank-chambers, Cross-street, Reading. Deposit, 1*l.* 1s. For further particulars see advertisement in our issue of April 17.

JUNE 16.—**Bury.**—HOUSES.—The Corporation of Bury invite from local builders schemes for laying out a site, together with plans, elevations, and sections and tenders, for the erection of thirty houses, to let at rents varying from 4s. to 4s. 6d. per week. Premiums of 20*l.*, 10*l.*, and 5*l.* will be awarded for the first, second, and third schemes selected in order of merit, subject to certain conditions, copies of which may be obtained upon application to the Borough Engineer.

* JUNE 28.—FOUNTAIN.—Designs for a fountain for a public garden. See advertisement in this issue for further particulars.

JUNE 30.—**Walsoken.**—SCHOOL.—The Norfolk Education Committee invite plans, specifications, and estimates for a new school. A plan of the site and full particulars can be obtained on application to the Secretary at the County Education Offices, Shirehall, Norwich.

JULY 9.—**Stoke-upon-Trent.**—ADDITIONS TO TOWN HALL.—The Corporation invite designs for additions to existing Town Hall. Premiums of 100*l.* and 50*l.* Conditions, etc., from Town Clerk, Town Hall, Stoke-upon-Trent. For further particulars see advertisement in our issue of May 15.

JULY 17—**Burslem.**—COMPETITIVE PLANS—EXTENSION OF TIME.—The Corporation invite competitive plans for new public buildings, which will be placed before an assessor to be appointed by the Corporation. Subject to the conditions of competition, the architect whose design is considered by the assessor to be the best will be appointed to carry out the work, and the respective architects whose designs the assessor decides to be second and third in order of merit will be awarded premiums of 100*l.* and 50*l.* respectively. All designs must be sent in before July 17 next. Conditions of competition, etc., can be obtained from Mr. Bettany, Borough Surveyor, on payment of 2*l.* 2s.

JULY 30.—**Grimsby.**—The Corporation invite designs for the extension of existing Town Hall. Premiums of 250*l.*, 150*l.*, and 100*l.* Conditions from Mr. H. Gilbert Whyatt, Borough Engineer, Town Hall, Grimsby. Full particulars only on receipt of a deposit of 2*l.* (Cheques to be made out to Mr. Frank Stephenson, Borough Treasurer.) See advertisement in our issue of April 24 for further particulars.

JULY 31.—**Glasgow.**—LAYING-OUT LAND.—**The Patrons of the Royal Incorporation of Hutchesons' Hospital in the City of Glasgow invite competitive designs for laying-out for feuing and building their lands of Thornliebank, in the Parish of Eastwood and County of Renfrew, near the City of Glasgow. The terms and conditions of the competition, and, upon deposit of 3*l.* 3s., skeleton plans showing the situation and boundaries of the different portions of the lands, may be had from the Chamberlains of the Hospital, Messrs. Hill & Hoggan, 194, Ingram-street, Glasgow, with whom designs must be lodged not later than July 31, 1909. Premiums of 100*l.*, 75*l.*, 50*l.*, and 25*l.* respectively will be awarded.**

Contracts.

BUILDING.

JUNE 5.—**Ruswarp.**—CHURCH.—Primitive Methodist church at Ruswarp. Name and trade to Mr. W. G. Smithson, A.R.I.B.A., architect, 13, Bond-street, Leeds.

JUNE 6.—**Halifax.**—CHURCH.—St. Hilda's Church, Gibraltar-road, Halifax. Names to Messrs. Sutcliffe & Sutcliffe, architects, New-road, Hebden Bridge.

JUNE 7.—**Barnstaple.**—ALTERATIONS TO HALL.—Alterations to the Masonic Hall, Barnstaple. Plans, etc., may be obtained at office of Mr. J. C. Southcombe, P.A.S.I., architect, Barnstaple.

JUNE 7.—**Blackburn.**—SMALL HOLDINGS SCHEME ON WARCOCK GREEN FARM, OSWALDTWISTLE.—Tenders are invited, from Blackburn contractors only, for (1) the formation of a new road; (2) surface draining; and (3) the erection of dwelling-houses on the above-mentioned farm. Names to Messrs. L. H. Maxwell & A. R. Gradwell, joint architects for the scheme.

JUNE 7.—**Darlington.**—TECHNICAL COLLEGE MECHANICAL LABORATORY.—The Corporation of Darlington, acting as the Local Education Authority, invite tenders for the erection of a new mechanical laboratory for thirty-six students at the Technical College, Darlington. Plans, etc., may be seen, and bills of quantities obtained, at the offices of Mr. George Winter, Borough Surveyor, Town Hall, Darlington, on depositing a cheque for 2*l.* 2s.

JUNE 7.—**Sowerby Bridge.**—REPEWING.—The Renovation Committee invite tenders for the repewing of West End Congregational Church, Sowerby Bridge. Names and addresses to Mr. A. Halliwell, Secretary to Repewing Committee, at 6, Egerton-street, Sowerby Bridge, along with a deposit of 1*l.*

JUNE 7.—**West Lynn.**—ALTERATIONS, ETC.—Alterations to existing buildings and the erection of others at "The Elms," West Lynn, for Mr. Wm. Wing. Applicants must enclose 1*l.* 1s. Messrs. Walker & Walker, architects, Wisbech and Terrington.

JUNE 8.—**Barrow-in-Furness.**—SCHOOL ALTERATIONS.—The Corporation invite tenders for alterations to windows, Rawlinson-street Schools. Plans may be seen, and bills of quantities, etc., may be obtained, on application at the Borough Engineer's Office, Town Hall.

JUNE 8.—**Hillsborough.**—LABOURERS' COTTAGES.—Tenders are invited for the building of twelve labourers' cottages. Plans, etc., can be obtained from the Clerk of the Council, Mr. William Sinclair, Council Offices, Workhouse, Lisburn, on payment of 5s.

JUNE 8.—**Hull.**—ADDITIONS.—Tenders are invited for certain alterations and additions at the East Hull Liberal Club premises, Holderness-road. Plans, etc., may be seen, and quantities obtained, from Mr. Geo. Thorp, architect, 1, St. Mary's-chambers, Lowgate.

JUNE 8.—**Usk.**—SCHOOL.—Monmouthshire Education Committee invite tenders for the erection of a new Council school to accommodate ninety-six children at Usk, Mon. Plans, etc., may be seen, and bills of quantities obtained, at the office of Mr. C. Dauncey, C.C. Offices, Newport, on payment of a deposit of 2*l.* 2s.

JUNE 9.—**Belfast.**—ENGINE-HOUSE.—The Belfast Harbour Commissioners invite tenders for the erection of an engine-house, boiler-house, hydraulic plant room, and chimney near the entrance to the Alexandra Graving Dock, Belfast. Drawings may be seen at the office of the Harbour Engineer, Mr. W. Redfern Kelly, M.Inst.C.E., from whom copies of specification, etc., may be obtained.

JUNE 9.—**Belfast.**—STABLING.—Erection and completion of stabling, stores, etc., Millfield, Belfast, for Messrs. J. & J. Kelly. Copy of quantities may be had from Mr. S. C. Hunter, building surveyor, 2, Wellington-place, upon deposit of 1*l.* 1s.

JUNE 9.—**Elgin.**—DYKES.—Tenders are wanted for mason and blacksmith works of new dykes at Highfield. Plans, etc., may be seen at the Burgh Surveyor's Office, Elgin.

JUNE 9.—**Hull.**—BOWLING GREEN STORES.—The Parks and Burial Committee of the Corporation invite tenders for the erection of bowling green stores in the Pearson and West Parks. Drawings, etc., may be seen, and quantities obtained, at office of Mr. Joseph H. Hirst, City Architect, Town Hall, Hull.

JUNE 9.—**Hull.**—HOUSE.—The Parks and Burial Committee of the Corporation invite tenders for the erection of a superintendent's house in the Pearson Park. Drawings, etc., may be seen at office of Mr. Joseph H. Hirst, City Architect, Town Hall, Hull, and quantities obtained, upon a deposit of 2*l.* 2s.

JUNE 9.—**Tyderwen.**—SCHOOL, ETC.—Glamorgan C.C. invite tenders for the following works, viz.:—(1) New mixed school at Tyderwen; (2) laboratories at the Penarth County Schools. Plans, etc., may be seen, and bills of quantities obtained, for work No. 1 at the Maesteg Police-station, and for both the works at offices of Mr. W. E. R. Allen, Deputy-Clerk of the County Council, Glamorgan C.C. Offices, Westgate-street, Cardiff.

JUNE 10.—**Brighouse.**—WAREHOUSE.—Excavator's, mason's and bricklayer's, carpenter's and joiner's, slater's and plasterer's, plumbing and glazing, iron and steel roofing required in the erection of a four-story warehouse at Bailiffe Bridge, near Brighouse. Plans, etc., may be seen and bills of quantities obtained, at offices of Messrs. Joseph F. Walsh, F.S.I., and Graham Nicholas, F.R.I.B.A., architects, Museum-chambers, Halifax.

JUNE 10.—**Dewsbury.**—ALTERATIONS.—Alteration of Rookby Cottage, Dewsbury. Plans may be seen, and bills of quantities obtained at offices of Messrs. Kirk, Sons, & Ridgway, F.R.I.B.A., architects, surveyors, and valuers, Market-place, Dewsbury.

JUNE 10.—**Dunfermline.**—TENEMENT.—Estimates are wanted for the mason, brick, joiner, plumber, plaster, slater, and painting works of proposed tenement at Milton Green for Mr. James Lamond. Plans, etc., may be seen, and all further information obtained, on application to Messrs. A. Scobie & Son, architects, Douglas-street.

JUNE 10.—**Friendly.**—STORE, HOUSE, ETC.—Erection of a branch store, house, and appurtenances, at Friendly, near Luddenden Foot, for the Luddenden Foot Industrial Co-operative Society, Ltd. Drawings, etc., may be seen, and bills of quantities obtained, at the offices of the architects, Messrs. Longbottom & Culpan, architects and surveyors, George-street, Halifax.

* JUNE 10.—**Leytonstone.**—ADDITIONS.—The West Ham Guardians invite tenders for the erection of additions to the water tower at the Workhouse. See advertisement in this issue for further particulars.

JUNE 10.—**Treherbert.**—CLUB PREMISES.—Tenders are invited for the erection of new premises at Treherbert for the Conservative Club. Plans, etc., can be seen at the offices of Messrs. J. Rees & Son, architects, Pentre, and bills of quantities obtained upon a deposit of 2*l.* 2s.

JUNE 10.—**West Ham.**—ADDITIONS TO WATER TOWER.—The Guardians invite tenders for the erection of an addition to the water tower at their Workhouse, Union-road, Leytonstone, N.E. The drawing, etc., prepared by their Architect, Mr. Francis J. Sturdy, may be inspected at the Clerk's Office, Board-room, Union-road, Leytonstone, N.E.

JUNE 11.—**Berwick-on-Tweed.**—AUCTION MART.—New auction mart, for the Border Counties Agricultural Association, Ltd., to be erected at North-road, Berwick-upon-Tweed. Plans, etc., may be seen at the office of Mr. J. Lorimer Miller, architect and surveyor, 10, Sandgate, Berwick-upon-Tweed.

JUNE 11.—**Hatfield.**—SMALL HOLDINGS.—Hertfordshire C.C. invite tenders for the erection of three dwelling-houses with out-buildings and farm buildings at Hatfield. Plans, etc., can be seen, and form of tender obtained, at the office of the Council's Land Agent, Mr. H. W. Crozier, No. 60, Fore-street, Hertford, upon payment of a deposit of 1*l.* 1s.

JUNE 12.—**Barncoose.**—ADDITIONS.—Additions to residence at Barncoose for Capt. W. Thomas, according to plans, etc., which may be seen at his residence, or at the office of Mr. Sampson Hill, architect, Green-lane, Redruth, from whom all particulars relating to the work may be obtained.

JUNE 12.—**Briton Ferry.**—HOUSES.—Briton Ferry U.D.C. invite tenders for the erection at Briton Ferry of fifty-one houses for the working classes, in accordance with plans, etc., which may be inspected upon application to Mr. H. Alex. Clarke, architect and surveyor, Council Offices, Briton Ferry.

JUNE 12.—**York.**—CONVENIENCES AT MOUNT-VALE AND ALBEMARLE-ROAD.—The York Corporation invite tenders for the building of the above. Drawings may be seen, and specification, etc., obtained, on application to Mr. F. W. Spurr, City Engineer, Guildhall, York. 1*l.* 1s. to be deposited for quantities, etc.

JUNE 15.—**Dowlais.**—CHAPEL AND SCHOOL.—Alterations and additions to Bethania Chapel, Dowlais, and erecting new school, etc., in connexion therewith. Plans, etc., may be seen, and bills of quantities obtained, at the offices of Mr. E. A. Johnson, F.R.I.B.A., architect, Merthyr Tydfil, on payment of a deposit of 2*l.* 2s.

JUNE 15.—**Langley Park, Beamish, and Cold Hesledon.**—SCHOOLS.—The C.C. of Durham invite tenders for new Council schools at Langley Park, Beamish, and Cold Hesledon. Plans, etc., may be seen, and bills of quantities obtained, as follows:—(1) For Langley Park School (600 scholars) and Beamish School (450 scholars), at the office of Mr. W. Rushworth, Shire Hall, Durham. (2) For Cold Hesledon School (264 scholars), at the office of Mr. J. W. F. Phillipson, architect, Murton-chambers, 8, Grainger-street, Newcastle-on-Tyne.

JUNE 15.—**Middlesbrough.**—ALTERATIONS, ETC., TO RAILWAY STATION.—North-Eastern Railway Directors invite tenders for alterations and additions at Middlesbrough Station. Plans, etc., may be seen upon application to the Station Master's Office, Middlesbrough, and quantities, etc., obtained from Mr. William Bell, the Company's architect, at York.

JUNE 16.—**Aberystwyth.**—SHOPS AND PREMISES.—Rebuilding shops and premises in North-parade, Aberystwyth, for Mr. George Wilkinson and Mr. J. R. James. Plan, etc., may be obtained on application to the architect, Mr. G. T. Bassett, A.R.I.B.A., architect and surveyor, Aberystwyth.

JUNE 16.—**Cwmgorse.**—CHURCH HALL.—Tenders are invited for the erection of a church hall at Cwmgorse, Gwaun-cae-Gurwen. Plans, etc., can be seen at Glasfryn House. Rev. Evan Davies, Parsonage, Gwaum-cae-Gurwen.

JUNE 16.—**Glasgow.**—EXTENSIONS.—The Corporation invite tenders for works required in connexion with the proposed alterations and additions to the Port-Dundas Electricity Station. Plans may be seen, and specifications, etc., had, on application to Mr. W. W. Lackie, Electrical Engineer, 75, Waterloo-street, Glasgow, on making a deposit of 2*l.* for each schedule.

JUNE 16.—**Portsmouth.**—ADDITIONS, ETC.—Tenders are invited for certain alterations and additions to the Medical Officer of Health's Department in the Town Hall. The specification and plan may be seen, and a form of tender obtained, at the Borough Engineer's Office, Town Hall.

JUNE 17.—**Ross.**—SCHOOL WORKS.—Erection of new closets and alterations at the Lea C.F. Schools, near Ross. Plans, etc., may be seen at the Rectory.

JUNE 18.—**Baschurch.**—COTTAGES, ETC.—Salop C.C. invite tenders for the erection of two cottages and homesteads for small holdings at Weston Lullingfields, about two miles from Baschurch Station. Plans, etc., may be seen, and copies of the bill of quantities, etc., may be obtained, at the office of the agent, Mr. W. T. Hall, College-hill, Shrewsbury, upon payment of 1*l.* 1s.

* JUNE 18. — **Battersea, S.W.** — STORE. — The Metropolitan Water Board invite tenders for a store building, etc., at the Battersea Works of the Board, S.W. See advertisement in this issue for further particulars.

* JUNE 18. — **Enfield.** — PUMPING STATION.—The Metropolitan Water Board invite tenders for a pumping station in Hadley Wood, Enfield. See advertisement in this issue for further particulars.

JUNE 18.—**London.**—STORE BUILDINGS.—The Metropolitan Water Board invite tenders for the construction of a store building and other contingent works on land situate at the Battersea Works of the Board, London, S.W. The drawings, etc., may be inspected at the offices of the Chief Engineer, Savoy-court, Strand, W.C. Forms of tender, etc., from the Chief Engineer on the production of an official receipt for the sum of 10*l.*, which sum must be deposited with the Accountant at Savoy-court, Strand, W.C.

JUNE 18.—**Swanage.**—SCHOOL ENLARGEMENT.—The County Education Committee invite tenders for enlarging the Swanage Council School. Plans, etc., may be seen at the Town Hall, Swanage.

JUNE 22.—**Abbeyfeale.**—CO-OPERATIVE CREAMERY.—Tenders are invited for the erection of a central creamery at Abbeyfeale, according to plans, etc., of Mr. J. Fant, which may be inspected at the office of Mr. M. A. Greaney, Secretary, Abbeyfeale Co-operative Creamery, Ltd., Station-road, Abbeyfeale.

JUNE 22.—**East Ham.**—SCHOOL WORKS.—The Education Committee invite tenders for external repairing, painting, and sundry work at Shaftesbury-road School; and for cleansing and whitewashing the latrines and urinals at nineteen schools. Specifications may be seen, and forms of tender obtained, at the Education Office, Wakefield-street, East Ham. The contractor must deposit with each tender a 5*l.* Bank of England note, or crossed cheque of equal value.

* JUNE 22. — **Taunton.** — POST-OFFICE.—The Commissioners of H.M. Works, etc., invite tenders for a new head Post-office at Taunton. See advertisement in this issue for further particulars.

* JUNE 25. — **Bethnal Green.**—BANDSTAND.—The London C.C. invite tenders for a bandstand composed of wood and tiles at Boundary-street Garden, Bethnal Green. See advertisement in this issue for further particulars.

JUNE 28.—**Widnes.**—REPAIRS, ETC.—Widnes Education Committee invite tenders for repairs, colouring, cleaning, and painting at the various Council and non-provided schools. Specifications may be seen any day at the Education Offices, Town Hall, Widnes.

JUNE 29. — **Redgrave.** — SCHOOL WORKS. — The Managers of Redgrave School invite tenders for the enlargement of this school. For plans and specifications apply to Rector, Redgrave.

* JUNE 29. — **Walthamstow.** — SCHOOL. — The Walthamstow Education Committee invite tenders for junior mixed school. See advertisement in this issue for further particulars.

JULY 14.—**Kendal.**—LIBRARY WORKS.—Kendal T.C. invite tenders for the purchase and removal of the western portion of the old public library building; also the removal and re-erection of the eastern portion of the said building, as well as the poultry market, upon a site to be fixed at the Parkside-road depôt. Conditions and forms of tender may be obtained on application to Mr. F. W. Oxberry, Borough Surveyor, Town Hall, Kendal.

NO DATE — **Ballykilbeg.** — IMPROVEMENTS TO CHURCH. — Sundry improvements and building additions to St. Malachy's Church, Ballykilbeg, Co. Down, for the Very Rev. Wm. Dempsey, P.P., V.F. The plans, etc., can be obtained from Mr. J. J. M'Donnell, architect, 27, Chichester-street, Belfast.

NO DATE.—**Kendal.**—SCHOOL.—Tenders are invited for the whole or the various works required in the alteration and enlargement of Burneside School, near Kendal, for the Managers. Plans can now be inspected, and bill of quantities, etc., obtained, on application at office of Mr. John Hutton, M.R.S.I., architect, **Kendal.**

NO DATE — **Kendal.** — STABLE, COACH-HOUSE, AND COTTAGE.—To build stable, coach-house, and small cottage, two miles from Kendal. Particulars and quantities at office of Mr. J. F. Curwen, Kendal.

NO DATE — **Pontardawe.** — CHAPEL.—New Welsh Congregational Chapel at Alltwen, Pontardawe. Plans, etc., at the house of Mr. James Hinkin, Bryn-yr-allt, Pontardawe, or at the offices of Messrs. C. S. Thomas, Meager, & Jones, architects, Wind-street, Swansea.

NO DATE.—**Porthcawl.**—HOUSE.—Erection of a detached house at Porthcawl. For plans and specifications apply Mr. E. W. Howard, architect and surveyor, 2, Meadowside-terrace, Springfield, Chelmsford, Essex.

NO DATE.—**Roydon.**—SCHOOL.—Tenders are required for the erection of a new school at Roydon. Plans, etc., can be inspected at Castle Rising Rectory.

NO DATE.—**Southampton.**—BUILDING CERTAIN ADDITIONS AT ST. MICHAEL'S HOUSE.—Plans, etc., may be inspected, and bills of quantities, etc., obtained, at the Borough Engineer's Office upon production of the Borough Treasurer's receipt for a deposit of 3*l.* 3s.

NO DATE.—**Stranton.**—SKATING RINK.—Erection of skating rink, Stranton. Plans, etc., may be seen, and particulars obtained, on application to Mr. Fred W. Turner, architect, civil engineer, and surveyor, 8, Fountain-terrace, West Hartlepool.

ENGINEERING, IRON, AND STEEL.

JUNE 6. — **Stokesley.** — GREAT AYTON BRIDGE.—North Riding of Yorkshire C.C. invite tenders for the masonry and roadwork in connexion with the rebuilding of the bridge. Plans, etc., at the County Surveyor's Office, County Hall, Northallerton.

JUNE 7. — **Aberdeen.** — HEATING, ETC.—Aberdeen City District Lunacy Board invite tenders for making and supplying materials for alterations on the heating and ventilation of the Kingseat Asylum Hospital. Specifications, etc., may be had on application to Mr. C. B. Williams, Clerk, 20, Union-terrace, Aberdeen.

JUNE 8.—**Cottingham.**—BRIDGE WORKS.—Cottingham U.D.C. invite tenders for the whole of the works required in the extension of the Cottingham, Nine Foot, and Skidby Drain Bridges, in North Carr-lane, Cottingham. Plan, etc., may be seen, and further information obtained, at the Council Office, Market Green, Cottingham. Copies of the quantities, with form of tender, will be supplied on payment of the sum of 1*l.*

JUNE 8.—**Mountain Ash.**—GAS PLANT.—Mountain Ash U.D.C. invite tenders for supplying and delivering to Penrhiwceiber Gasworks the necessary materials and executing the labour in resetting from foundations two regenerative settings of six retorts, and rebuilding one bed of six retorts from floor level, in existing empty arches. Further particulars required may be obtained from Mr. W. G. Thomas, Surveyor, Town Hall, Mountain Ash.

JUNE 9.—**Stoke-upon-Trent.**—ELECTRIC WIRING.—The Guardians invite tenders for the electric wiring of a portion of the Cottage Homes, comprising nursery, receiving home, etc., in accordance with the specification, etc., by Messrs. Edwards & Shaw, consulting engineers. A copy of the specification, etc., may be obtained on application to offices of Mr. T. Rowley, Clerk to the Guardians, Union Offices, Stoke-upon-Trent.

JUNE 10.—**Dudley.**—TRACTION BATTERY AND AUTOMATIC BOOSTER WITH SWITCHGEAR.—Specification, etc., may be obtained from Mr. Charles E. Savage, Borough Electrical Engineer, Electricity Works, Bull-street, Dudley, where plans of buildings, etc., can be inspected. Application for specification must be accompanied by a deposit of 1*l.* 1s.

JUNE 10. — **London.** — MACHINERY. — The Metropolitan Asylums Board invite tenders for the opening out and closing up of the engines, boiler, and auxiliary machinery of the paddle steamboat *Geneva Cross*, in accordance with specification prepared by Mr. W. T. Hatch, M.Inst.C.E., M.Inst.M.E., Engineer-in-Chief. Specification, etc., may be obtained at the office of the Board, Embankment, London, E.C.

JUNE 14. — **Droylsden.**—WEIGHBRIDGE.—Droylsden U.D.C. invite tenders for the provision and fixing of a weighbridge at the Sewage Disposal Works, Droylsden. Specifications, etc., may be obtained on application to the Engineer and Surveyor, Mr. Charles Hall, at the Council Offices, Droylsden.

JUNE 14. — **Pendleton, Salford.**—BATTERY, ETC.—The Electricity Committee invite tenders for the supply, etc., at the Corporation Electricity Station, Frederick-road, Pendleton, of battery, booster, and switchgear. Specification, etc., may be obtained on application at the office of Mr. Victor A. H. M'Cowen, M.Inst.E.E., the Borough Electrical Engineer, Frederick-road, Pendleton, on payment of a deposit of 2*l.* 2s.

JUNE 15. — **Brentford.**—HEATING.—The Guardians invite tenders for hot and cold services and heating at the Infirmary Nurses' Home now in course of erection. Plans, etc., at the office of the architect, Mr. W. H. Ward, Paradise-street, Birmingham, or at offices of Mr. William Stephens, Clerk to the Guardians, Union Offices, Isleworth, W.

* JUNE 17.—**Tooting.**—FENCING.—Lambeth B.C. invite tenders for the erection of wrought-iron unclimbable fencing at the Lambeth Cemetery, Tooting. See advertisement in this issue for further particulars.

JUNE 18.—**Enfield.**—FOUNDATIONS, ETC.—The Metropolitan Water Board invite tenders for the preparation of the site, and the construction of the foundations, etc., for a pumping station situate in Hadley-road, Enfield. The drawings, etc., may be inspected at the offices of the Chief Engineer, Savoy-court, Strand, W.C., on and after Monday, June 7. Forms of tender, etc., from the Chief Engineer on the production of an official receipt for the sum of 10*l.*, which sum must be deposited with the Accountant at Savoy-court, Strand, W.C.

JUNE 19. — **Glasgow.** — PLANT.—Glasgow Corporation invite tenders for the oxidiser plant, electric motors, air compressor, piping, etc., required for the Shieldhall Outfall Works. Specifications, etc., may be obtained at the Office of Public Works, City Chambers, 64, Cochrane-street, by depositing 5*l.* Plans, etc., may be seen, and further particulars obtained, on presentation of the specification at the office of the Consulting Engineer, Mr. Wm. D. Hamilton, M.Inst.C.E., 59, Bath-street, Glasgow.

JUNE 21. — **Dublin.**—BRIDGES.—The Directors of the Great Northern Railway Company (Ireland) invite tenders for the reconstruction of bridges with steel-plate girders. Parties wishing to tender may see the drawings, etc., at the office of Mr. W. H. Mills, Engineer-in-Chief, Amiens-street, Dublin, or copies of them at the office of the District Engineer, Belfast, and can obtain lithographed copies of the drawings, etc.

* JUNE 21.—**Ilford.**—ELECTRIC AND GAS LIGHTING.—The Ilford Education Committee invite tenders for electric light wiring and fittings and emergency gas light service at Goodmayes School, Ilford. See advertisement in this issue for further particulars.

JUNE 21.—**Stockport.**—BRIDGE.—The Borough Extension Committee invite tenders for the labour and materials required in the erection of a bridge over the Ashton Canal at Broadstone-road. The plans, etc., may be seen at the office of Mr. John Atkinson, A.M.Inst.C.E., Borough Surveyor, Town Hall, Stockport, and the general conditions, etc., may also be obtained on payment of 2*l.* 2s.

* JUNE 29.—**Leyton.**—GAS LIGHTING.—The Leyton Education Committee invite tenders for improvement of gas lighting at two schools. See advertisement in this issue for further particulars.

* JUNE 29.—**Leyton.**—HOT-WATER HEATING.—The Leyton Education Committee invite tenders for hot-water heating apparatus at Lybourn-street School. See advertisement in this issue for further particulars.

MISCELLANEOUS.

JUNE 7.—**Hanley.**—CARTING.—Tenders at so much per ton are invited from carters residing in the Borough for the carting of ashes and house refuse to the destructor works, Botany Bay. Mr. A. E. Hulme, Inspector of Nuisances, Town Hall, Hanley.

JUNE 7. — **Rothesay.** — TUBES AND FITTINGS.—The Gas Committee of the T.C. of Rothesay invite tenders for the supply of tubes and fittings for the Gasworks. Mr. Robert D. Whyte, Town Clerk, Rothesay.

JUNE 7.—**Southampton.**—CARTING.—For carting of material for the repair of main roads, New Forest Division, Romsey Division. Specification, etc., from Mr. W. J. Taylor, County Surveyor, The Castle, Winchester.

JUNE 7.—**Southampton.**—STEAM ROLLERS.—For the supply of steam rollers for use on the main roads in Farnborough Division, Hartley Wintney Division, New Forest Division, Romsey Division, Wolmer Forest Division. Specification and form of tender from Mr. W. J. Taylor, County Surveyor, The Castle, Winchester.

JUNE 7.—**Whitchurch (Hants).**—STEAM ROLLING.—The R.D.C. invite tenders for the steam rolling to be done on the main and district roads. Forms of tender, etc., may be obtained at office of Mr. Spencer Clarke, Clerk to the Council, Whitchurch, Hants.

JUNE 8.—**Leeds.**—FLOORBOARDS.—The Guardians invite tenders for supplying and laying of white floorboards to cover the dining-hall floor of their workhouse, Beckett-street, Leeds. Forms of tender, etc., can be obtained at offices of Mr. James H. Ford, Clerk to Guardians, Poor Law Offices, South-parade, Leeds.

JUNE 8.—**Leeds.**—MOTOR.—Leeds Tramways Committee invite tenders for the supply of one 100-h.p. motor. Specification, etc., may be obtained on application at the Tramways General Office.

JUNE 9. — **Salford.** — CARTING.—The River Committee invite tenders for carting and haulage. Mr. L. C. Evans, Town Clerk, Town Hall, Salford.

JUNE 9. — **Stoke-upon-Trent Union.**—FURNISHING.—The Guardians invite tenders for the furnishing of the midwifery wards at the Workhouse. Specifications and forms of tender may be had on application to Mr. T. Rowley, Clerk to the Guardians, Union Offices, Stoke-upon-Trent.

JUNE 12. — **Cattal.**—FURNISHING.—The Yorkshire Inebriates' Act Joint Committee invite tenders for the work of furnishing a new block to accommodate forty men at the Inebriates' Reformatory, Cattal. Schedules may be obtained on application to Mr. J. Vickers-Edwards, County Hall, Wakefield

JUNE 12.—**Dundee.**—ROAD ROLLER.—The Dundee T.C. invite tenders for a steam road roller of compound type, with scarifier. Particulars may be obtained from Mr. Jas. Thomson, City Engineer, Municipal Offices, Dundee.

JUNE 14. — **Kirkburton.** — FURNISHING. — West Riding C.C. (Storthes Hall Asylum Sub-Committee) invite tenders for the furnishing and equipment of the buildings comprising the second portion of the main institution and farm residence, at Storthes Hall Asylum, Kirkburton, near Huddersfield. Schedules and further information may be obtained on application to Mr. J. Vickers-Edwards, County Architect, County Hall, Wakefield.

JUNE 14. — **Plymouth.**—FIXING BOARDING.—Portsmouth Education Committee (Elementary Education) invite tenders for fixing a boarding to playground railings at Kent-street Council School. Form of tender, etc., may be obtained from the Surveyor, Mr. A. H. Bone, at his office, Cambridge Junction, Portsmouth.

JUNE 16.—**Cranbrook.**—STEAM ROLLING.—Cranbrook R.D.C. invite tenders for steam rolling and scarifying during the ensuing season. Forms of tender must be obtained of Mr. T. H. Crampton, Clerk, Cranbrook.

JUNE 17.—**Birkenhead.**—MOTOR FIRE-ENGINE.—The Corporation of Birkenhead invite tenders for the supply of a petrol motor fire-engine, fitted with telescopic ladders. Specification, etc., from Mr. James Fearnley, Town Clerk, Town Hall, Birkenhead.

JUNE 21. — **Beckenham.**—ROAD ROLLER.—Beckenham U.D.C. invite tenders for the supply and delivery to Beckenham of a 12½-ton steam road roller. Particulars, etc., obtained on application to Mr. John A. Angell, Surveyor, on the production of a receipt from the Collector for a deposit of 2*l.*

NO DATE.—**Shanklin.**—WATERING VAN.—Shanklin U.D.C. invite quotations for the supply and delivery of one street watering van. Full particulars of requirements on application to Mr. John Marsh, Clerk to the Council, at the Council Chambers, Shanklin, Isle of Wight.

PAINTING, etc.

JUNE 7. — **Warrington.**—PAINTING.—The Finance Committee of the County Borough of Warrington invite tenders for the outside painting of the several properties belonging to them. Specifications, etc., may be seen, and forms of tender, etc., obtained, at the office of the Borough Surveyor, Town Hall.

JUNE 8.—**Aston.**—PAINTING.—Aston Guardians invite tenders to paint, whitewash, etc., the interiors of certain blocks of buildings at the Workhouse, Gravelly Hill. Specification of the work may be seen, and forms of tender obtained, on application to the Master of the Workhouse.

JUNE 9. — **Belfast.** — PAINTING.—Painting of the exterior of all ironwork and woodwork of the Royal Victoria Hospital in accordance with specification, which can be obtained from the superintendent.

JUNE 10.—**Crumpsall.**—PAINTING, ETC.—Prestwich Guardians invite tenders for painting, paperhanging, etc., at their Workhouse, Delaunays-road, Crumpsall, Manchester. Specifications may be obtained at the Workhouse on June 7 and 8, between the hours of 10 and 12 noon.

JUNE 10.—**Salisbury.**—PAINTING.—Tenders are invited for painting, etc., to property in Salisbury belonging to the Trustees of the Salisbury Municipal Charities, a specification of which can be seen at the offices of the surveyor, Mr. M. Harding, 58, High-street, Salisbury.

JUNE 11. — **London.** — PAINTING.—The St. Marylebone B.C. invite tenders for whitewashing, papering, and painting work in respect of the lodges at their Cemetery, East Finchley. Applications for specification, etc., can be made at the Cemetery Department, Town Hall, Marylebone-lane, W., or to Mr. T. Bevan, Superintendent, at the Cemetery.

JUNE 14.—**Bristol.**—PAINTING.—The Bristol Education Committee invite tenders for the painting, colouring, etc., of certain schools. Specifications, etc., may be obtained from Mr. Peter Addie, Exchange, Corn-street, Bristol, on payment of a deposit of 1*l.* 1s.

JUNE 14. — **Halifax.**—PAINTING, ETC.—The Education Committee of the Halifax Corporation invite tenders for painting and colouring at sundry schools during the ensuing midsummer holidays. Specifications may be seen, and forms of tender obtained, on application of Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax, upon payment of the sum of 1*l.*

* JUNE 15.—**Lincoln's Inn-fields.**—CLEANING AND PAINTING.—The Strand Guardians invite tenders for painting and cleaning at the Workhouse. See advertisement in this issue for further particulars.

JUNE 19.—**Macclesfield.**—PAINTING.—Tenders are required for the outside painting of the infirmary annexe and nurses' home at Parkside Asylum, Macclesfield. Specification, etc., can be obtained on application to Mr. H. Beswick, County Architect, Chester.

JUNE 21.—**Heptonstall.**—CLEANING, ETC.—Tenders are desired for the cleaning, painting, and decorating of Heptonstall Parish Church. Specifications may be obtained, and designs seen, at the architects' offices. Messrs. Sutcliffe & Sutcliffe, F.S.I., architects, New-road, Hebden Bridge.

JUNE 22. — **Isleworth.** — PAINTING.—The Borough of Richmond (Surrey) and the Heston and Isleworth Urban District Joint Isolation Hospital Committee invite tenders for painting, distempering, and other works at the Mogden Isolation Hospital, near Kneller Hall, Isleworth. Forms of specification, etc., can be obtained upon written application to the Clerk to the Committee at 213, High-street, Hounslow.

* JUNE 29.—**Leyton.**—CLEANSING, PAINTING, ETC.—The Leyton Education Committee invite tenders for cleansing, painting, and repairs at four schools. See advertisement in this issue for further particulars.

ROADS, SANITARY, AND WATER WORKS.

JUNE 7. — **Auckland.** — SEWER.—The R.D.C. of Auckland invite tenders for providing and laying down about 200 yds. of 6-in. sanitary pipe sewer, etc., at High Lands, near Butterknowle. Plans, etc., can be seen, and further particulars obtained, on application to Mr. Charles Heslop, Sanitary Surveyor, 9, Cradock-street, Bishop Auckland.

JUNE 7.—**Birtley, Chester-le-Street.**—MAKING-UP.—The Highways Committee of the R.D.C. invite tenders for making up twenty private streets at Birtley, comprising Lot 2. Plans, etc., may be seen, and schedule of quantities, etc., obtained, at the office of Mr. Geo. W. Ayton, Highway Surveyor, Chester-le-Street.

JUNE 7.—**Hebburn.**—ROAD WORKS.—The U.D.C. of Hebburn invite tenders for asphalting roadways and cementing footpaths. Form of tender may be obtained, and plans, etc., seen, at the Surveyor's Office, Argyle-street, Hebburn.

JUNE 7. — **Radcliffe.** — PAVING.—Radcliffe U.D.C. invite tenders for the labour required in the paving of portions of Lever-street, Kennedy-street, Clyde-road, back Lever-street, back Turks-road, and back Clyde-road. Plans, etc., can be seen, and form of tender obtained, from the Surveyor, at the Council Offices, Radcliffe.

JUNE 8.—**Guiseley.**—SEWERAGE.—Guiseley U.D.C. invite tenders for the making of about 149 yds. of 12-in. stoneware pipe sewer in Park-road, Guiseley. Plans, etc., may be seen, and bills of quantities, etc., may be obtained, on application to Mr. Joe Battye, Surveyor, Town Hall, Guiseley, on payment of 10s. 6d.

JUNE 8. — **Malden.** — The Maldens and Coombe U.D.C. invite tenders for:—Contract No. 1.—For making-up and maintaining a part of Kingston-road. Contract No. 2.—For paving with artificial stone slabs the footway of a part of Kingston-road. The drawings, etc., may be seen, and specifications, etc., obtained, on application to the Engineer and Surveyor, Mr. Reginald H. Jeffes, A.M.Inst.C.E., at the Council Offices, New Malden, upon payment of a deposit of 6*l.* 6s. for Contract No. 1 and 2*l.* 2s. for Contract No. 2.

JUNE 8.—**Swansea.**—WIDENING ROAD.—The Corporation invite tenders for the widening of part of Neath-road (Golden-row), Landore. Forms of tender, etc., may be obtained at the office of the Borough Surveyor, 13, Somerset-place.

JUNE 9.—**Mexborough.**—TAR PAVING.—The Mexborough U.D.C. invite tenders for the tar paving of certain of the footpaths in the Cemetery at Mexborough, and for the fixing of concrete edging at the sides of such footpaths, and for the supply and delivery of such edging. A specification, etc., may be seen on application to the Surveyor at the Council Offices.

JUNE 9.—**Sculcoates.**—REPAIR OF ROADWAY.—The Guardians of the Poor invite tenders for the repair of the roadway, etc., at the rear of the Cottage Homes, at Hessle. A copy of the specification, etc., can be obtained from the Surveyor and Architect, Mr. T. Beecroft Atkinson, M.S.A., 11, Trinity House-lane, Hull.

JUNE 9. — **Stoke-upon-Trent.**—TRENCHES.—The Guardians invite tenders for trenches in connexion with the hot-water service at the Workhouse, in accordance with plans, etc., to be seen on application to Mr. A. R. P. Piercy, Architect, Union Offices, Stoke, from whom particulars may be obtained.

JUNE 10.—**Fforestfach.**—WATER WORKS.—Swansea R.D.C. invite tenders for supplying and laying 4-in. water-mains, sluice valves, surface boxes, ball hydrants, etc.:—(1) At Armine-road, Fforestfach, for a distance of 300 yds. or thereabouts; (2) at Middle-road, Fforestfach, for a distance of 134 yds. or thereabouts. Plans, etc., may be inspected, and any further particulars obtained, at the offices of Mr. T. Trevor Williams, the Surveyor of the Council.

JUNE 10. — **Morton Grange, Houghton-le-Spring.** — SEWAGE WORKS. — The R.D.C. of Houghton-le-Spring invite tenders for the construction of additional tanks and filters at the William Henry Pit Sewage Works, near Fence Houses, in the Township of Morton Grange. Plans, etc., may be seen, and copies of quantities, etc., obtained, on application to Mr. William Morley, Sanitary Surveyor to the above Council, Sunderland-street, Houghton-le-Spring, on payment of 1*l.* 1s.

JUNE 10. — **Oldham.** — STREET WORKS.—The Surveyors' Committee invite tenders for the sewering, paving, flagging, and completing. Plans, etc., can be seen, and quantities, etc., obtained, at the office of the Borough Surveyor.

JUNE 12.—**Barmby Moor.**—WATER WORKS.—The Pocklington R.D.C. invite tenders for supplying about 2,600 lin. yds. of 3-in. cast-iron pipes, with sluice valves, etc.; also for mains, pump house, ferro-concrete water tank, etc. Drawings, etc., may be seen, and form of tender obtained, at the office of Mr. Thos. Robson, Solicitor, Pocklington, or at the office of the Engineer, Mr. H. A. Johnson, M.Inst.C.E., 15, The Exchange, Bradford.

JUNE 12.—**Chadderton.**—STREET WORKS.—Chadderton U.D.C. invite tenders for the sewering, paving, and flagging required in streets. Forms of tender may be obtained on application at the Surveyor's Office, Town Hall, Chadderton.

JUNE 12.—**Loanhead.**—CONCRETE FOOT-PAVEMENTS.—The T.C. of the Burgh of Loanhead invite tenders for the construction of concrete foot-pavements. Drawings may be seen, and copies of the specification, etc., may be obtained, at the office of Mr. George Somervel Carfrae, C.E., 1, Erskine-place, Edinburgh, on payment of 1*l.*

JUNE 14. — **Bristol.** — TAR PAVING.—The Bristol Education Committee invite tenders for relaying and refacing playgrounds of the Council schools. Copies of the specifications may be obtained from Mr. Peter Addie, Exchange, Corn-street, Bristol.

JUNE 14.—**Leeds.**—STREET WORKS.—The Highways Committee invite tenders for the flagging of a portion of Street-lane and for the paving of Bower-road (part) and Rockingham-street. Forms of tender, etc., may be obtained, and copies of the documents forming the contract inspected, on application at the Highways Office, 155, Kirkstall-road.

JUNE 15.—**Deptford.**—KERB.—The B.C. invite tenders for relaying kerb and footways on either side of Malpas-road and Shardeloes-road, and for other works in connexion therewith. Form of tender, etc., can be obtained on application during office hours at the office of the Borough Surveyor, Mr. J. Sutcliffe, A.M.Inst.C.E., Town Hall, New Cross-road, S.E.

JUNE 15. — **Deptford.** — WOOD PAVING.—Deptford B.C. invite tenders for wood paving the carriageways on either side of the tramway tracks in Malpas-road and Shardeloes-road with creosoted deal blocks. Form of tender, etc., can be obtained on application during office hours at the office of the Borough Surveyor, Mr. J. Sutcliffe, A.M.Inst.C.E., Town Hall, New Cross-road, S.E.

JUNE 15.—**Swanwick.**—SEWAGE DISPOSAL WORKS.—The Alfreton U.D.C. invite tenders for the construction of sewage tanks and works incidental thereto at the Swanwick Sewage Farm. The drawings, etc., can be seen, and the bill of quantities, etc., can be obtained, at office of Mr. R. F. Ward, Surveyor, King-street, Alfreton, on payment of a deposit of 1*l.*

JUNE 16. — **Braintree.** — SEWER.—The Braintree U.D.C. invite tenders for providing and laying about 180 yds. of 6-in. stoneware pipe sewer, together with the necessary manholes. Specification can be seen at the office of Mr. H. H. Nankivell, Surveyor to the Council, Vestry Hall, Braintree.

* JUNE 16.—**Rye.**—DRAINAGE.—The Rye R.D.C. invite tenders for carrying out a sewerage scheme for drainage of Rye Harbour, Sussex. See advertisement in this issue for further particulars.

JUNE 18. — **Bawtry, Doncaster.** — SEWER.—The R.D.C. of Doncaster invite tenders for laying 47 yds. of 6-in. cast-iron pipe sewer at Station-road, Bawtry. Particulars, etc., from Mr. W. R. Crabtree, Surveyor to the Council, Union Offices, High-street, Doncaster.

JUNE 19. — **Halifax.** — CONTACT BEDS.—The Highways Committee of the Halifax Corporation invite tenders for the construction of six pairs of contact beds at Copley. Plans, etc., may be seen, and forms of tender obtained, on application to Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax, upon payment of the sum of 10*l.* for each set of quantities.

JUNE 19. — **Harrogate.** — EXTENSION OF SEWAGE WORKS.—The Corporation invite tenders for an extension of their North Outfall Sewage Disposal Works at Bilton, in the Borough of Harrogate. Plans, etc., may be seen, and form of tender obtained, at the office of the engineers, Messrs. E. W. Dixon & Ritchie, 3, East-parade, Leeds, or 1a, Cambridge-crescent, Harrogate, upon deposit of 2*l.* 2s.

* JUNE 21. — **Ilford.** — HOT-WATER HEATING.—The Ilford Education Committee invite tenders for heating by hot water at Goodmayes School, Ilford. See advertisement in this issue for further particulars.

JUNE 21.—**Walton-upon-Thames.**—STREETS.—The U.D.C. invite tenders for making-up private streets. The drawings, etc., may be seen, and bills of quantities obtained, upon personal application at offices of Mr. R. Wilds, Surveyor to the Council, Council Offices, Walton-on-Thames, and the payment of a deposit of 1*l.* 1s. for the bill of quantities for each road.

JUNE 26.—**Windsor.**—HOUSE DRAINS CONNEXIONS.—Windsor R.D.C. invite tenders for forming the connexions between house drains and the sewers in the Parish of Clewer Without. Conditions of tender, etc., may be obtained from the Surveyor to the Council, Mr. W. Menzies, Englefield Green, Surrey.

JUNE 28.—**Kiveton Park.**—ANSTON SEWERAGE AND SEWAGE DISPOSAL WORKS.—The Kiveton Park R.D.C. invite tenders for the laying of about 3,900 yds. of 9-in. and 6-in. stoneware pipe sewers, the construction of manholes, tanks, filters, etc., at Anston. The drawings may be seen, and copies of the specification, etc., may be obtained, at the offices of the engineers, Messrs. Berrington, Son, & Watney, Bank-buildings, Lichfield-street, Wolverhampton, and 28, Victoria-street, Westminster, S.W., on payment of 5*l.* 5s.

* JUNE 29. — **Fareham.**—DRAINAGE.—The Visiting Committee of the County Asylum, Knowle, Fareham, Hants, invite tenders for drainage, etc., works at the Asylum. See advertisement in this issue for further particulars.

NO DATE.—**Bradfield.**—ASPHALTING.—The C.C. of the West Riding of Yorkshire (Education Department) invite tenders for asphalting and other work required to be done at Low Bradfield Provided School. Particulars may be obtained on application to Mr. W. Hague, Divisional Clerk, Education Office, Ecclesfield.

NO DATE.—**Porkellis.**—MINING.—Tenders are invited for opening up 2,300 ft. approximately of old adit situated at Porkellis, Wendron. For full particulars apply to the Boswin Mines, Ltd., Porkellis, Helston.

STONES, MATERIAL, AND STORES.

JUNE 7. — **Ashton-in-Makerfield.**—MATERIALS.—The U.D.C. invite tenders for the supply of materials. Forms may be had upon application to Mr. Albert Sykes, Clerk to the Council, Council Offices, Ashton-in-Makerfield, or upon receipt of addressed envelope.

JUNE 7.—**South Hetton.**—COLLIERY TIMBER.—The South Hetton Coal Company, Ltd., invite tenders for the supply of all kinds of colliery timber from July 1, 1909, to June 30, 1910. Forms of tender, etc., may be obtained on application to Mr. J. R. Lambert, South Hetton, near Sunderland.

JUNE 8. — **Ely.** — GRAVEL AND CLUNCH.—The Ely R.D.C. invite tenders for the supply of coarse clean gravel, also 100 yds. of clunch. Mr. E. B. Claxton, Clerk to the Council, Egremont-street, Ely.

JUNE 8.—**London.**—RAILS, ETC.—The Bengal and North-Western Railway Company, Ltd., invite tenders for the supply and delivery of (*a*) 4,934 tons steel rails, 50 lb. per yard, and 140 tons fish-plates for ditto; (*b*) 154 tons dog spikes; (*c*) sixteen well curbs, 25 ft. diameter, as per specifications to be seen at the Company's Offices, 237, Gresham House, Old Broad-street, London, E.C. For specification (*a*) a fee of 1*l.* and (*b*) and (*c*) a fee of 10s. each will be charged, which cannot, under any circumstances, be returned.

JUNE 8.—**London.**—WIRE FENCING, ETC.—The South Indian Railway Company, Ltd., invite tenders for the supply of (1) iron wire fencing (1,325 tons); (2) spoke wheels with axles; (3) springs. Specifications, etc., may be obtained at the Company's Offices, 91, York-street, Westminster, S.W. A charge will be made of 1*l.* for each copy of specification No. 1, and 10s. for each copy of Nos. 2 and 3. Copies of the drawings may be obtained at the office of Mr. Robert White, M.Inst.C.E., Consulting Engineer to the Company, 3, Victoria-street, Westminster, London, S.W., on payment of 5s. per sheet.

JUNE 8.—**Tynemouth.**—SLAG.—Tenders are invited for the supply of 480 tons of slag, in accordance with the particulars to be obtained at the office of Mr. John F. Smillie, Borough Surveyor, Tynemouth.

JUNE 8.—**Wakefield.**—ROAD MATERIAL.—Wakefield R.D.C. invite tenders for materials. Forms of tender, etc., may be obtained from Mr. Frank Massie, M.Inst.C.E., at his office, at Tetley House, 47, Kirkgate, Wakefield.

JUNE 8. — **Walsall.**—MATERIALS.—The Corporation of Walsall invite tenders for the supply and delivery of about 2,900 lin. yds. 12-in. stoneware pipes, about 370 lin. yds. 18-in. stoneware pipes, about 70,000 blue Staffordshire bricks. Specifications, etc., may be obtained at the office of the Borough Surveyor, Council House, Walsall.

JUNE 9. — **Edinburgh.**—CAST-IRON PIPES.—Edinburgh and District Water Trustees invite tenders for supplying a quantity of cast-iron pipes. The drawings may be seen, and copies of specification, etc., obtained, at the Superintendent's Office, No. 12, St. Giles-street, Edinburgh.

JUNE 9. — **Edinburgh.** — PIPES.—Edinburgh and District Water Trustees invite tenders for providing and delivering about 145 tons of dry sand cast-iron pipes, 6 in. diameter, with relative special castings. Copies of the specification, etc., may be obtained at the offices of the Engineer, Mr. W. A. Tait, C.E., 72a, George-street, Edinburgh, and 9, Victoria-street, Westminster, S.W., on payment of 1*l.*

JUNE 9. — **Kingston-upon-Thames.**—STORES.—The Corporation invite tenders for the supply of lime, cement and bricks, drain pipes, ballast, gravel, etc. Forms of tender can be obtained at office of Mr. Harold A. Winser, Town Clerk, Municipal Offices, Kingston-upon-Thames.

JUNE 9.—**London.**—SPRINGS, ETC.—The East Indian Railway Company invite tenders for the supply and delivery of (1) helical and volute springs, (2) brass boiler tubes, as per specifications to be seen at the Company's Offices, Nicholas-lane, London, E.C. For each specification a fee of 1*l.* 1s. is charged, which cannot under any circumstances be returned.

JUNE 11.—**Bristol.**—ARTICLES.—The Guardians of the Poor invite tenders for the supply of articles. Forms to be obtained at office of Mr. J. J. Simpson, Clerk, St. Peter's Hospital, Bristol.

JUNE 12. — **Cornsay.** — MATERIALS.—Tenders are solicited for the supply of materials required at Cornsay Colliery for the twelve months ending June 30, 1910. Forms of tender may be had on application to Messrs Ferens & Love, Market-place, Durham.

JUNE 12. — **Macclesfield.** — MATERIALS.—The Gas Committee invite tenders for the supply of materials. Forms of tender, etc., may be had on application to the Engineer, Gasworks, Macclesfield.

JUNE 12. — **Worsbro'.**—ROAD MATERIAL.—Worsbro' U.D.C. invite tenders for the supply of 1,000 tons 2½-in. tarred dross and 700 tons unbroken dross. Mr. Alfred Clegg, Clerk to the Council, Saville House, Worsbro' Bridge.

JUNE 14. — **Sevenoaks.**—GRANITE, ETC.—Sevenoaks U.D.C. invite tenders for the supply of 465 yds. cube,

more or less, of granite or quartzite broken to a gauge of 2 in. Forms of tender, with specification, etc., may be obtained of Mr. Samuel Towlson, A.M.Inst.C.E., Surveyor to the Council, Argyle-road, Sevenoaks.

JUNE 16.—**Enfield.**—GRANITE.—The U.D.C. of Enfield invite tenders for the supply of 2,150 tons (more or less) of hand-broken Clee Hill Dhu, or best blue Guernsey granite, and 1,200 tons (more or less) of broken Leicestershire or other approved granite. Forms to be obtained only of Mr. Richard Collins, the Council's Surveyor, at Public Offices, Enfield, Middlesex.

JUNE 16.—**Trimdon.**—STORES.—The Trimdon Coal Company invite tenders for the supply of timber, oils, grease, firebricks, and general stores for six months. For forms of tender, Mr. I. Penney, Deafhill Colliery, Trimdon Grange, S.O.

JUNE 18. — **Kingsbridge.**—IRON PIPES.—Kingsbridge R.D.C. (Devon) invite tenders for the supply of 5 tons of 6-in. and 5 tons of 4-in. new cast-iron socket pipes. Mr. William Beer, Clerk to the Council, Kingsbridge.

JUNE 19.—**Beccles.**—FLINTS AND GRAVEL.—Tenders are invited for the supply and delivery on to the Corporation Wharf, Beccles, as required, 200 cubic yds. of 1½-in. broken flints and 160 cubic yds. of path gravel. Mr. T. O. Cudbird, C.E., Borough Surveyor, Beccles.

JUNE 19. — **Nottingham.** — VALVES, ETC.—Tenders for the supply of valves and hydrants, pipes, lead, taps, and fittings. Specifications, etc., may be seen, and other information obtained, at the offices of the Water Engineer, Mr. F. W. Davies, St. Peter's Church-side, and forms of tender may be obtained at that office on payment of 1*l.* 1*s.*

JUNE 21. — **Stevenage.** — GRANITE. — Stevenage U.D.C. invite tenders for the supply of 1,000 tons broken Guernsey, Leicester, or other granite, for the repair of the roads. The usual form of contract, with bond, is deposited for inspection at the Council's Offices, Orchard-road, Stevenage.

NO DATE.—**Keighley.**—VALVES, PIPES, ETC.—Tenders are invited for the iron pipes, valves, etc., for tanks and filters in connexion with new sewage disposal works, Uncra. Specifications and quantities may be had on application from Mr. Walter Fowlds, A.M.Inst.C.E., Borough Engineer.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
•LECTURER IN BUILDING CONSTRUCTION	Borough Polytechnic Inst. ...	See advertisement in this issue	June 10
•ROAD FOREMAN	Hendon U.D.C.	117*l.* per annum	June 14
•INSTRUCTOR IN MANUAL TRAINING (WOOD)	Belfast Technical Institute...	130*l.* per annum	June 16

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
•STK. OF BUILDERS', BRASS FDRY. AND IRONMONGERY, OXFORD-ST., W.—On Premises	Henry W. Figg & Son	June 8
•FREEHOLD BUILDING PLOTS, SHOPS, ETC., BRIXTON-HILL—On the Estate	Douglas Young & Co.	do.
•BUILDING SITE, SPITALFIELDS MARKET—At the Mart	Norton, Trist, & Gilbert	June 9
•TEN WEEKLY LEASEHOLD VILLAS, LEYTON—At the Mart	Norton, Trist, & Gilbert	do.
•FREEHOLD PROPERTY, STRAND, W.C.—At the Mart	Farebrother, Ellis, Egerton, Breach, Galsworthy, & Co.	June 10
•BUSINESS PREMISES, SOUTHMINSTER, ESSEX—On the Premises	Fred Taylor	June 15
•FREEHOLD PROPERTY, PHŒNIX WHARF, BATTERSEA—At the Mart	David Burnett, Son, & Baddeley	June 16
•DEALS, BATTENS, ETC.—Great Hall, Winchester House, Old Broad-street, E.C.	Churchill & Sim...	do.
•BUILDER AND CONTRACTOR'S PLANT AND STOCK—On the Premises, Essex-st., N.E.	J. Hibbard & Sons	June 17
•FREEHOLD BUILDING LAND (VARIOUS), MIDDLESEX—At the Mart	Edwin Fox & Bousfield	June 23
•BUILDING SITE, EASTCOTE, NEAR PINNER—At the Mart	Ventom, Bull, & Cooper	June 24
•FREEHOLD RESIDENCE AND LAND, MAIDENHEAD—At the Mart	Edwin Fox & Bousfield	June 30

MISCELLANEOUS—*Continued from page 685.*

formality of ballot, up to the beginning of the first session of the Society. Anyone interested in the objects of the Society, and desiring to become a member, is invited to communicate with the Hon. Secretary, Mr. L. Gaster, Editor of the *Illuminating Engineer*, 32, Victoria-street, S.W.

PAROCHIAL WORK AND ARCHITECTS.

At the meeting on May 27 of the St. Pancras Guardians the North Infirmary Visiting Committee brought up a report recommending that Mr. A. E. Pridmore, 2, Broad Street-buildings, be engaged at an inclusive fee of 5 per cent. on the amount of the expenditure to supervise the necessary decorating and repairs estimated not to cost more than 500*l.* this year. Mr. Curtis moved an amendment to the motion for the adoption of the recommendation, to the effect that the Committee be requested to invite applications from architects and others in the borough to do the work. Mr. Hewett, in seconding, said that Mr. Pridmore had had a good deal of money out of the borough, and he thought that some of the ratepayers should have a turn now. Mr. Lloyd-Taylor, in supporting the recommendation, pointed out that if the principle was established that only St. Pancras men ought to have St. Pancras work there would soon be retaliation, and the result would be that the ratepayers would be in a worse position than at present. Mr. Boden said that he understood that Mr. Pridmore was an architect, and that this was surveyor's work. The Rev. F. H. Jones said that Mr. Pridmore was already engaged at the operating-theatre, and was therefore in a good position to carry out the work satisfactorily. Mr. Woodman was proceeding to advocate that the work should be given to a ratepayer when the Chairman (Major H. Munday) ruled the speaker out of order. In the course of the discussion which ensued it was stated on behalf of the Committee that by employing Mr. Pridmore there would be a saving of 3*l.* per week. In the result the amendment was lost by sixteen votes to five, and the Committee's recommendation carried.

Patents.

APPLICATIONS PUBLISHED.*

9,366 of 1908.—Wilhelm Veit and Josef Mathias Kindler: Automatically locking door locks.

9,973 of 1908.—Victor Carlson: Wrenches.

10,045 of 1908.—Fitchel & Sachs: Grinding machines.

10,304 of 1908.—Robert William Henry Rodney: Fasteners for doors, casements, and the like.

10,874 of 1908.—Albert Chambers Freeman and William Dunz: Reinforced concrete constructions.

12,702 of 1908.—William James Bourne: Roofing tiles.

12,824 of 1908.—Ernest Alfred Considère and Bert Chatland: Window blinds and rollers therefor.

13,805 of 1908.—Francis Joseph Twigg: Slotted casement stay.

14,524 of 1908.—Alfred Clark and John Machell: Manhole covers, gulley grates, and the like for road or pathways.

18,904 of 1908.—James Shaw Donnan and James Jardine: Window sash fittings.

20,313 of 1908.—James Angus and Hendry & Steel: Window fittings.

20,462 of 1908.—William Calway: Cement and other blocks or slabs.

20,486 of 1908.—Thomas Aubrey Pool: Construction of rotary screening apparatus.

21,151 of 1908.—August Born: Monkey wrenches.

24,213 of 1908.—Lawrence George Reppell: Key fasteners for doors or the like.

25,071 of 1908.—Alfred Bentley: Sash windows.

27,802 of 1908.—Simon Kornbeck: Mortise lever locks.

3,293 of 1909.—Thomas Elsley, Ltd., and William Henshaw Gelson: Means for fastening or clamping stays for casements, windows, and the like.

* All these applications are in the stage in which opposition to the grant of patents upon them can be made.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

May 11.—By HARRIE STACEY & SON (at Redhill).

Horley, Surrey.—Axes Farm, 15 a., f. £1,330

May 19.—By BENTLEY, HOBBS, & MYTTON (at Worcester).

Whittington, Worcester.—Whittington Grange and 22 a. 3 r. 26 p., f. 2,400

May 20.—By C. FOSTER & SON (at Bishop's Stortford).

Takeley, Essex.—High House Farm, 165 a. 1 r. 30 p., f. 2,330

Mill House and 1 r. 22 p., f. 200

May 21.—By KEMSLEYS' (at Epping).

Abridge, Essex. — London-rd., ten freehold cottages and 14 a. 1,970

May 22.—By ERNEST S. BEARD & DANIELL (at Colchester).

Great Bentley, Essex.—St. Mary's Estate, 219 a. 1 r. 36 p., f. 5,800

May, Risby's and Swallows Row Farms, accommodation lands and cottages, 176 a. 3 r. 16 p., f. 3,722

May 24.—By ANTCLIFFS'.

Leytonstone.—49, Mornington-rd., f., e.r. 26*l.*... £280

53, Queen's-rd., f., e.r. 34*l.* 475

Stratford.—12, 12A, 14, 16, and 18, Edith-rd., u.t. 71½ yrs., g.r. 28*l.*, w.r. 80*l.* 12s..... 100

By JAMES W. COADE.

Dulwich.—52 and 54, Heber-rd., u.t. 68 yrs., g.r. 11*l.* 11s., y.r. 32*l.*, and p..... 450

By ELLIOTT, SON, & BOYTON.

Regent's Park.—25, Chester-ter., l.g.r. 52*l.* 10s., u.t. 15 yrs., g.r. 6*l.*, with reversion 850

By GODDARD & SMITH.

Covent Garden.—54, Drury-la. (s.), u.t. 64 yrs., g.r., etc., 54*l.* 12s., e.r. 275*l.*..... 1,800

By SETH PHILLIPS & SON (at Monmouth).

Llanvihangel-Yestern-Lewern, Monmouth.—Sunny Bank and Cropshawlin Farms, 70 a. 0 r. 25 p., f. and l..... 1,500

May 25.—By JOSHUA BAKER, COOKE, & STANDEN.

Kingsbury.—Hay-la., Roe Green Cottages (3), and 1 a. 1 r. 12 p., f. 660

By C. RAWLEY CROSS & CO.

Gunnersbury.—6, Gunnersbury-av., u.t. 86 yrs., g.r. 20*l.* 10s., y.r. 110*l.* 1,350

By C. W. DAVIES & SON.

Barnesbury.—46, Albion-gr., u.t. 35 yrs., g.r. 7*l.*, e.r. 40*l.*..... 265

Clapton.—57, Lockhurst-st., u.t. 68½ yrs., g.r. 5*l.*, w.r. 31*l.* 4s. 175

Hoxton.—13 and 15, Bracklyn-st., u.t. 25 yrs., g.r. 8*l.* 10s., w.r. 70*l.* 4s. 150

By DEBENHAM, TEWSON, RICHARDSON, & CO.

Combe Martin, Devon.—Buzzacott House, with stabling and 23¼ acres, u.t. 1805 yrs., g.r. 11s. 2,500

Clapham.—118, King's-av., stabling, and 2 a. 0 r. 23 p., u.t. 15 yrs., g.r. 46*l.*, p. 200

Southwark.—21 to 29 (odd), Prices-st., u.t. 9½ yrs., g.r. 45*l.* 10s., gross rental 230*l.* 165

By MARK LIELL & SON.

Wanstead.—Blake Hall-rd., Letcombe, f., e.r. 100*l.*..... 1,250

East Ham.—30 to 38 (even), Latimer-av., u.t. 92 yrs., g.r. 21*l.*, w.r. 117*l.* 680

11, Southchurch-gdns. (s.), u.t. 995 yrs., g.r. 5*l.* 5s., y.r. 46*l.* 365

131, Altmore-av., f., e.r. 31*l.* 4s..... 290

35, Caulfield-rd., u.t. 90 yrs., g.r. 4*l.* 10s., w.r. 24*l.* 14s. 125

Forest Gate.—11, Field-rd., and l.g.r. 4*l.*, u.t. 48 yrs., g.r. 8*l.* 8s., w.r. 26*l.* 120

Wanstead.—10, 12, and 14, Sydney-rd., u.t. 74 yrs., g.r. 9*l.* 9s., w.r. 57*l.* 4s. 345

By MARSH & MARSH.

Kensington.—4 and 6, Pembroke-rd., u.t. 12½ yrs., g.r. 10*l.*, y.r. 130*l.* 630

By E. & H. RUDDOCK.

West Kensington.—42, Sinclair-rd., u.t. 66 yrs., g.r. 15*l.*, e.r. 70*l.*..... 350

Shepherd's Bush.—20, Ellingham-rd., u.t. 68 yrs., g.r. 5*l.*, e.r. 36*l.* 310

By J. M. SLY & Co.
Acton.—14, Cumberland-rd., u.t. 87 yrs., g.r. 7*l.* 10s., e.r. 38*l.* £290
By HARRIE STACEY & SON.
Nutfield, Surrey.—Main Rd., Two Enclosures of Pasture Land, 11 a. 0 r. 35 p., f..... 925
By FREDERICK WARMAN.
Silvertown.—2 to 10 (even), Arthur-st., u.t. 68 yrs., g.r. 19*l.*, w.r. 91*l.* 135
By ALFRED MANSELL & Co. (at Shrewsbury).
Alderbury, Montgomery.—Bellan House Farm and Stone Quarry, 71 a. 0 r. 2 p., f..... 4,050
By WALLER & KING (at Southampton).
Woolston, Hants.—Manor-rd., freehold plot of land..... 355
Southampton.—17, High-st. (s.), f., y.r. 165*l.* .. 2,700
By H. & R. L. COBB (at Rochester).
Cobham, Kent.—Millfield and 3 a. 0 r. 6 p., f... 1,150
High Halstow, Kent.—Freehold arable land, 16 a. 2 r. 30 p..... 375
Hoo St. Werburgh, Kent.—Freehold arable land, 29 a. 2 r. 500
Gillingham, Kent.—18, Waterloo-rd., f., y.r. 17*l.* 300
By THOS. WM. GAZE & SON (at Ipswich).
Badingham, Suffolk.—The Lodge Farm, 72 a. 2 r., f. 1,135
Clopton, Suffolk.—Pear Tree Farm, 73 a. 3 r. 25 p., f... 1,050
By MADDISON, MILES, & MADDISON (at Yarmouth).
Great Yarmouth.—7 to 12, Gordon-ter., f. 710
6, Gordon-ter. (jobmaster's premises), f. 700
Runham, Norfolk.—Freehold marsh land, 5 a. 2 r. 3 p. 275
May 26.—By LOCKING, COULSON, & WALKER.
Dalston.—14 to 24 (even), Holly-st., u.t. 9½ yrs., g.r. 18*l.*, w.r. 218*l.* 8s. 210
By MALLOUS & KAYE.
Laindon, Essex.—High-rd., Sunnydale, f. 260
By GEO. PEARCE & SONS.
Stoke Newington.—63, Pellerin-rd., u.t. 64 yrs., g.r. 7*l.* 7s., e.r. 36*l.* 295
By WYATT & SON (at Chichester).
Aldingbourne, Sussex.—A copyhold cottage .. 120
Runcton, Sussex.—Freehold farm, 62 a. 2 r. 0 p. 2,590
May 27.—By BISLEY & SONS.
Rotherhithe.—12, 13, and 14, Hadland-st., f., w.r. 85*l.* 16s. 850
33, St. Marychurch-st., f., w.r. 26*l.* 225
By H. J. BLISS & SONS.
Bethnal Green.—26, Pollard-st., f., w.r. 65*l.* .. 400
23 to 33 (odd), Wimbolt-st., u.t. 13 yrs., g.r. 37*l.* 16s., w.r. 218*l.* 8s. 350
Victoria Park.—53, Approach-rd., u.t. 44½ yrs., g.r. 1*l.*, y.r. 40*l.* 320
By CHESTERTON & SONS.
Beckenham.—Queens Mead-rd., f.g.r. 35*l.*, reversion in 88 yrs..... 785
Bromley-gdns., f.g.r. 10*l.*, reversion in 88 yrs.. 215
Bromley, Kent.—Crescent-rd., f.g.r. 6*l.* 10s., reversion in 88 yrs..... 145
By HIGGINS & SON.
Regent's Park.—112, Regent's Park-rd., u.t. 51 yrs., g.r. 16*l.*, y.r. 85*l.* 420
By HERRING, SON, & DAW.
Clapham.—59, 69, and 71, Manor-st., f., y.r. 88*l.* 1,070
By C. C. & T. MOORE.
Hornchurch, Essex.—Herbert-rd., Bracondale, f., p..... 550
By NEWBON, SHEPHARD, & EDWARDS.
Clapton.—29 to 35 (odd), Clarence-rd., u.t. 29½ yrs., g.r. 12*l.*, w.r. 150*l.* 16s..... 555
169 and 171, Brooke-rd., u.t. 64 yrs., g.r. 12*l.*, y.r. 68*l.* 515
Hackney.—21 and 22, Poole-rd., u.t. 36 yrs., g.r. 11*l.*, y.r. 65*l.* 305
Hoxton.—48, Gopsall-st., u.t. 27½ yrs., g.r. 5*l.* 10s., y.r. 36*l.* 140
Islington.—120, Balls Pond-rd., u.t. 53½ yrs., g.r. 7*l.*, y.r. 36*l.* 210
Finsbury Park.—147, St. Thomas-rd., u.t. 60 yrs., g.r. 4*l.* 10s., y.r. 31*l.* 10s..... 240
Highbury.—12, Ardilaun-rd., u.t. 70½ yrs., g.r. 6*l.*, y.r. 50*l.* 380
Tottenham.—16 and 18, Stanley-rd.; 8, Albany-rd., f., w.r. 85*l.* 16s..... 455
By BOWYER & JONES.
Enfield.—High-rd., Mapleton House, stabling, two cottages and 1 a., f. 930
Hoe-la., Hoe-la. orchard, 12 a. 3r. 31 p., f.... 2,500
By STIMSON & SONS.
Peckham.—175, Choumert-rd., f., e.r. 44*l.* 4s... 350
Dulwich.—318, Crystal Palace-rd., u.t. 58½ yrs., g.r. 7*l.*, w.r. 39*l.* 150
Tooting.—33, 35, and 37, Gassiott-rd., u.t. 94 yrs., g.r. 15*l.* 15s., w.r. 109*l.* 4s..... 580
Wimbledon.—49 to 59 (odd), Hartfield-rd., f., w.r. 228*l.* 16s..... 1,810
Clapham.—1, 3, 5, and 21, Crescent-rd., u.t. 39½ yrs., g.r. 8*l.* 2s., w.r. 94*l.* 18s. 605
Stockwell.—20 and 22, Hargwynne-st., u.t. 55½ yrs., g.r. 10*l.*, w.r. 78*l.* 485
Battersea.—Howie-st., f.g.r. 10*l.*, reversion in 82 yrs..... 205
Radstock-st., f.g.r. 8*l.*, reversion in 82 yrs.... 165
Notting Hill.—Manchester-rd., f.g.r. 6*l.* 6s., reversion in 54 yrs. 130
Walmer-rd., f.g. rents 18*l.* 18s., reversion in 54 yrs..... 385
Tottenham.—12, Alfoxton-av., u.t. 83 yrs., g.r. 7*l.*, w.r. 39*l.* 230
By GRIMLEY & SON (at Birmingham).
Claverdon, Warwick.—Kington Grange and 210 a. 1 r. 32 p., f..... 4,300
Bearley, Warwick.—Bearley Grange and 244 a. 1 r. 13 p., f..... 8,500
By ALFRED SPAIN & SON (at Gravesend).
Gravesend.—84, Darnley-rd., f..... 670
EDWIN EVANS & SONS (at Lavender Hill).
Wandsworth.—146, 146a to 154, 154a (even), Earlsfield-rd, u.t. 84½ yrs., g.r. 32*l.* 10s., w.r. 240*l.* 12s..... 1,300
Clapham Common.—56, Manchuria-rd., u.t. 92 yrs., g.r. 7*l.* 10s., e.r. 40*l.* 450
Battersea.—8, 10, and 12, Tidbury-st., u.t. 34½ yrs., g.r. 5*l.* 8s., w.r. 81*l.* 18s. £400
42, Mysore-rd., u.t. 81 yrs., g.r. 7*l.* 7s., e.r. 38*l.* 340

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PUBLISHER'S NOTICES.

Nat. Tel., 6112 Gerrard. Telegrams, "The Builder, London."

THE INDEX (with TITLE-PAGE) for VOLUME XCV. (July to December, 1908) was given as a supplement with the issue of January 9th.

CLOTH CASES for Binding the Numbers are now ready, price 2s. 6d. each; also

READING CASES (Cloth), with Strings, price 9d. each.

THE NINETY-FIFTH VOLUME of "The Builder" (bound), price Twelve Shillings and Sixpence.

SUBSCRIBERS' VOLUMES, on being sent to the Office, will be bound at a cost of 3s. 6d. each.

CHARGES FOR ADVERTISEMENTS.

COMPETITIONS, CONTRACTS, ALL NOTICES ISSUED BY CORPORATE BODIES, COUNTY AND OTHER COUNCILS, PROSPECTUSES OF PUBLIC COMPANIES, SALES BY TENDER, LEGAL ANNOUNCEMENTS, etc., etc.

Six lines or under ..... 6s. 0d.
Each additional line..... 1s. 0d.

SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under..... 4s. 6d.
Each additional line (about ten words)..... 0s. 6d.

Terms for series of Trade advertisements, and for front page and other special positions, on application to the Publisher.

SITUATIONS WANTED (Single-handed—Labour only).

Four lines (about thirty words) or under..... 2s. 6d.
Each additional line (about ten words)..... 0s. 6d.

PREPAYMENT IS ABSOLUTELY NECESSARY.

*** Stamps *must not* be sent; but all sums should be remitted by Postal Orders, payable to J. MORGAN, and addressed to the Publisher of "THE BUILDER," 4, Catherine Street, W.C.

Advertisements for the current week's issue are received up to ONE p.m. on THURSDAY, but "Classification" is impossible in the case of any which may reach the Office after TWELVE NOON on that day. Those intended for the Outside Wrapper should be in by TWELVE NOON on WEDNESDAY.

ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY MORNING.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, etc., left at the Office in reply to advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

ADVERTISERS in "THE BUILDER" may have *Replies addressed to the Office*, 4, Catherine Street, Strand, W.C., *free of charge*. Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage. Unused stamps are returned to advertisers the week after publication.

N.B.—The Reply Boxes are not intended for trade lists, circulars, and the like; should these be received, they cannot (if noticed) be forwarded.

AN EDITION Printed on THIN PAPER, for FOREIGN and COLONIAL CIRCULATION, is issued every week.

READING CASES { NINEPENCE EACH. By post (carefully packed), 1s.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

	£ s. d.	
Best Stocks	1 6 6	per 1000 alongside, in river.
Picked Stocks for Facings	2 10 0	,, delivered
Flettons.....	1 4 6	,, at railway depôt.
Best Fareham Red	3 12 0	,, ,, ,,
Best Red Pressed Ruabon Facing..	5 0 0	,, ,, ,,
Best Blue Pressed Staffordshire ...	3 15 0	,, ,, ,,
Do. Bullnose	4 0 0	,, ,, ,,
Best Stourbridge Fire Bricks	3 14 0	,, ,, ,,
GLAZED BRICKS.		
Best White and Ivory Glazed Stretchers.....	10 7 6	,, ,, ,,
Headers	9 17 6	,, ,, ,,
Quoins, Bullnose, and Flats	13 17 6	,, ,, ,,
Double Stretchers	15 17 6	,, ,, ,,
Double Headers...	12 17 6	,, ,, ,,
One Side and two Ends	16 17 6	,, ,, ,,
Two Sides and one End.....	17 17 6	,, ,, ,,
Splays and Squints	15 7 6	,, ,, ,,
Best Dipped Salt Glazed Stretchers	10 7 6	,, ,, ,,
Headers.....	9 17 6	,, ,, ,,
Quoins, Bullnose, and Flats	13 17 6	,, ,, ,,
Double Stretchers	15 17 6	,, ,, ,,
Double Headers...	12 17 6	,, ,, ,,
One Side and two Ends	16 17 6	,, ,, ,,
Two Sides and one End.....	17 17 6	,, ,, ,,
Splays and Squints	15 7 6	,, ,, ,,
Second Quality White and Dipped Salt Glazed	1 5 0	,, less than best.

BRICKS, &c. (*continued*).

	s. d.	
Thames and Pit Sand	6 6	per yard, delivered.
Thames Ballast	5 0	,, ,,
Best Portland Cement.....	28 0	per ton, ,,
Best Ground Blue Lias Lime	19 0	,, ,,

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 11s. 6d. per yard, delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

	s. d.	
BATH STONE—delivered on road waggons, Paddington Depôt.....	1 6½	per ft. cube.
Do. do. delivered on road waggons, Nine Elms Depôt.....	1 8½	,, ,,
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 1	,, ,,
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 2½	,, ,,

	s. d.	
Ancaster in blocks	1 10	per ft. cube, deld. rly. depôt.
Beer ,, ...	1 6	,, ,,
Greenshill ,, ...	1 10	,, ,,
Darley Dale in blocks ...	2 4	,, ,,
Red Corsehill ,, ...	2 2	,, ,,
Closeburn Red Freestone	2 0	,, ,,
Red Mansfield ,,	2 4	,, ,,

YORK STONE—*Robin Hood Quality.*

	s. d.	
Scappled random blocks.	2 10	per ft. cube, deld. rly. dep.
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3	per ft. super. ,,
6 in. rubbed two sides ditto, ditto	2 6	,, ,,
3 in. sawn two sides slabs (random sizes)	0 11½	,, ,,
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7½	,, ,,
1½ in. to 2 in. ditto, ditto	0 6	,, ,,
HARD YORK—		
Scappled random blocks.	3 0	per ft. cube, ,,
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 8	per ft. super. ,,
6 in. rubbed two sides ditto	3 0	,, ,,
3 in. sawn two sides slabs (random sizes)	1 2	,, ,,
2 in. self-faced random flags	0 5	,, ,,

SLATES.

In. In.	£ s. d.	
20×10 best blue Bangor	13 2 6	per 1000 of 1200 at r.d.
20×12 ,, ,,	13 17 6	,, ,,
20×10 first quality ,,	13 0 0	,, ,,
20×12 ,, ,,	13 15 0	,, ,,
16×8 ,, ,,	7 5 0	,, ,,
22×10 best blue Portmadoc	12 12 6	,, ,,
16×8 ,, ,,	6 12 6	,, ,,
20×10 best Eureka unfading green ...	15 17 6	,, ,,
20×12 ,, ,,	18 7 6	,, ,,
18×10 ,, ,,	13 5 0	,, ,,
16×8 ,, ,,	10 5 0	,, ,,
20×10 permanent green	11 12 6	,, ,,
18×10 ,, ,,	9 12 6	,, ,,
16×8 ,, ,,	6 12 6	,, ,,

TILES.

	s. d.	
Best plain red roofing tiles...	42	0 per 1000, at rly. depôt.
Hip and Valley tiles ...	3	7 per doz. ,,
Best Broseley tiles	50	0 per 1000 ,,
Do. Ornamental tiles	52	6 ,, ,,
Hip and Valley tiles ...	4	0 per doz. ,,
Best Ruabon red, brown, or brindled do. (Edwards) ...	57	6 per 1000 ,,
Do. Ornamental do.....	60	0 ,, ,,
Hip tiles	4	0 per doz. ,,
Valley tiles	3	0 ,, ,,
Best Red or Mottled Staffordshire do. (Peakes)	51	9 per 1000 ,,
Do. Ornamental do.	54	6 ,, ,,
Hip tiles.....	4	1 per doz. ,,
Valley tiles	3	8 ,, ,,
Best "Rosemary" brand plain tiles.....	48	0 per 1000 ,,
Best Ornamental tiles.....	50	0 ,, ,,
Hip tiles.....	4	0 per doz. ,,
Valley tiles	3	8 ,, ,,
Best "Hartshill" brand plain tiles, sand-faced.....	50	0 per 1000 ,,
Do. pressed.....	47	6 ,, ,,
Do. Ornamental do.....	50	0 ,, ,,
Hip tiles	4	0 per doz. ,,
Valley tiles	3	6 ,, ,,
Staffordshire (Hanley) Reds or Brindled tiles	42	6 per 1000 ,,
Hand-made sand-faced ...	45	0 ,, ,,
Hip tiles	4	0 per doz. ,,
Valley tiles	3	6 ,, ,,

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.....	13 10 0	... 15 0 0
Deals: best 3 by 9	13 0 0	... 14 0 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 0 0	... 12 0 0
Battens: best 2½ by 6 and 3 by 6 ...	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less than best.
Battens: seconds	0 10 0	,,
2 in. by 4 in. and 2 in. by 6 in. ...	9 0 0	... 10 0 0
2 in. by 4½ in. and 2 in. by 5 in. ...	8 10 0	... 9 10 0
Foreign Sawn Boards—		
1 in. and 1½ in. by 7 in.	0 10 0	more than battens.
½ in.	1 0 0	,,

WOOD (*continued*).

BUILDING WOOD—(*continued*)—	At per load of 50 ft.					
	£	s.	d.	£	s.	d.
Fir timber: best middling Danzig or Memel (average specification)	4	10	0 ...	5	0	0
Seconds	4	0	0 ...	4	10	0
Small timber (8 in. to 10 in.)	3	12	6 ...	3	15	0
Small timber (6 in. to 8 in.)	3	0	0 ...	3	10	0
Swedish balks	2	10	0 ...	3	0	0
Pitch-pine timber (30 ft. average)	4	0	0 ...	4	15	0

JOINERS' WOOD.	At per standard.					
White Sea: first yellow deals, 3 in. by 11 in.	24	0	0 ...	25	0	0
3 in. by 9 in.	22	0	0 ...	23	0	0
Battens 2½ in. and 3 in. by 7 in.	16	10	0 ...	18	0	0
Second yellow deals, 3 in. by 11 in.	18	10	0 ...	20	0	0
3 in. by 9 in.	17	10	0 ...	19	0	0
Battens, 2½ in. and 3 in. by 7 in.	13	10	0 ...	14	10	0
Third yellow deals, 3 in. by 11 in. and 9 in.	13	10	0 ...	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	0	0 ...	12	0	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	0	0 ...	22	10	0
Do. 3 in. by 9 in.	18	0	0 ...	19	10	0
Battens	13	10	0 ...	15	0	0
Second yellow deals, 3 in. by 11 in.	16	0	0 ...	17	0	0
Do. 3 in. by 9 in.	14	10	0 ...	16	0	0
Battens	11	0	0 ...	12	10	0
Third yellow deals, 3 in. by 11 in.	13	0	0 ...	14	0	0
Do. 3 in. by 9 in.	12	10	0 ...	14	0	0
Battens	10	0	0 ...	11	0	0
White Sea and Petersburg—						
First white deals, 3 in. by 11 in.	14	10	0 ...	15	10	0
" " 3 in. by 9 in.	13	10	0 ...	14	0	0
Battens	11	0	0 ...	12	0	0
Second white deals, 3 in. by 11 in.	13	10	0 ...	14	10	0
" " 3 in. by 9 in.	12	10	0 ...	13	10	0
Battens	10	0	0 ...	11	0	0
Pitch-pine: deals	18	0	0 ...	21	0	0
Under 2 in. thick extra	0	10	0 ...	1	0	0
Yellow pine—First, regular sizes	44	0	0	upwards.		
Oddments	32	0	0	"		
Seconds, regular sizes	33	0	0	"		
Oddments	28	0	0	"		
Kauri Pine—Planks, per ft. cube	0	3	6 ...	0	5	0
Danzig and Stettin Oak logs—						
Large, per ft. cube	0	3	0 ...	0	3	9
Small " "	0	2	6 ...	0	2	6
Wainscot Oak Logs, per ft. cube	0	5	6 ...	0	6	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	8½ ...	0	0	9½
¼ in. do. do	0	0	7 ...		—	
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0	0	9 ...	0	1	0
Selected, Figury, per ft. super. as inch	0	1	6 ...	0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10 ...	0	1	0
Teak per load	17	0	0 ...	22	0	0
American Whitewood Planks, per ft. cube	0	4	0 ...	0	5	0
Prepared Flooring, etc.—	Per square.					
1 in. by 7 in. yellow, planed and shot	0	13	6 ...	0	17	0
1 in. by 7 in. yellow, planed and matched	0	4	0 ...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0 ...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0 ...	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6 ...	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0 ...	0	16	6
¼ in. by 7 in. yellow matched and beaded or V-jointed brds.	0	11	0 ...	0	13	6
1 in. by 7 in. " "	0	14	0 ...	0	18	0
¼ in. by 7 in. white " "	0	10	0 ...	0	11	6
1 in. by 7 in. " "	0	12	9 ...	0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton.					
	£	s.	d.	£	s.	d.
Rolled Steel Joists, ordinary sections	7	0	0 ...	7	10	0
Compound Girders, ordinary sections	9	0	0 ...	10	0	0
Steel Compound Stanchions	11	0	0 ...	12	0	0
Angles, Tees, and Channels, ordinary sections	9	0	0 ...	10	0	0
Flitch Plates	9	0	0 ...	9	10	0
Cast Iron Columns and Stanchions including ordinary patterns	7	10	0 ...	8	10	0

METALS.

IRON—	Per ton, in London.					
	£	s.	d.	£	s.	d.
Common Bars	8	10	0 ...	9	0	0
Staffordshire Crown Bars, good merchant quality	8	15	0 ...	9	5	0
Staffordshire "Marked Bars"	10	10	0 ...		—	
Mild Steel Bars	8	15	0 ...	9	5	0
Hoop Iron, basis price	9	5	0 ...	9	10	0
" " Galvanised	17	0	0 ...		—	
(*And upwards, according to size and gauge.)						
Sheet Iron, Black—						
Ordinary sizes to 20 g.	9	15	0 ...		—	
" " 24 g.	10	15	0 ...		—	
" " 26 g.	12	5	0 ...		—	
Sheet Iron, Galvanised, flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	0	0 ...		—	
Ordinary sizes to 22 g. and 24 g.	15	10	0 ...		—	
" " 26 g.	13	10	0 ...		—	
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	18	0	0 ...		—	
" " 22 g. and 24 g.	18	10	0 ...		—	
" " 26 g.	20	0	0 ...		—	
Galvanised Corrugated Sheets—						
Ordinary sizes, 6 ft. to 8 ft. 20 g.	14	10	0 ...		—	
" " 22 g. and 24 g.	14	15	0 ...		—	
" " 26 g.	16	5	0 ...		—	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	0	0 ...		—	
Best Soft Steel Sheets, 22 g. & 24 g.	13	0	0 ...		—	
" " " 26 g.	15	0	0 ...		—	
Cut Nails, 3 in. to 6 in. (Under 3 in., usual trade extras.)	10	10	0 ...	11	0	0

LEAD, &c. Per ton, in London.

	£	s.	d.		
LEAD—Sheet, English, 3lb. and up.	16	15	0	...	—
Pipe in coils	17	5	0	...	—
Soil pipe	19	5	0	...	—
Compo pipe	20	5	0	...	—
ZINC—Sheet—					
Vielle Montagne	26	10	0	...	—
Silesian	26	5	0	...	—
COPPER—					
Strong sheet per lb.	0	1	0	...	—
Thin "	0	1	1	...	
Copper nails "	0	0	10	...	—
Copper wire "	0	0	10	...	—
BRASS—					
Strong Sheet "	0	0	11	...	—
Thin "	0	1	0	...	—
TIN—English Ingots "	0	1	5	...	—
SOLDER—Plumbers "	0	0	7	...	—
Tinmans "	0	0	9½	...	—
Blowpipe "	0	1	0	...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

15 oz. thirds	2½d. per ft. delivered.
" fourths	1¾d. " "
21 oz. thirds	3d. " "
" fourths	2¾d. " "
26 oz. thirds	4d. " "
" fourths	3d. " "
32 oz. thirds	4¾d " "
" fourths	4¼d. " "
Fluted Sheet, 15 oz	3¼d. " "
" 21 oz.	4¼d. " "

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

⅛ Hartley's	2¾d. per ft. delivered.
3/16 "	2¾d. " "
¼ "	2¾d. " "
Figured, Oxford Rolled and "Oceanic" Glass, white	3¼d. " "
" " tinted	5d. " "

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	2	1
" " ,, in barrels	"	0	2	2
" " ,, in drums	"	0	2	5
Boiled ,, ,, in barrels	"	0	2	5
" " ,, in drums	"	0	2	8
Turpentine in barrels	"	0	2	5
" in drums	"	0	2	7
Genuine Ground English White Lead	per ton	20	10	0
Red Lead, Dry	"	20	0	0
Best Linseed Oil Putty	per cwt.	0	7	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c. Per gallon.

	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	0
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	16	0
Finest Pale Durable Copal	0	18	0
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	6
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	9
French and Brush Polish	0	10	6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.*, unless in some exceptional cases and for special reasons.]

*** Denotes *accepted*. † Denotes *provisionally accepted*.**

ABERGAVENNY.—For new north aisle vestry, etc., Holy Trinity Church. Mr. E. A. Johnson, F.R.I.B.A., architect, Abergavenny:—

T. Broad, Ltd.	£1,299	J. G. Thomas & Sons, Abergavenny*	£1,175
R. W. Moon	1,295		
H. Smith	1,180		

BETHERSDEN (Kent).—For erecting new offices and drainage at Council school, for Kent Education Committee. Mr. Wilfrid Robinson, Architect to Kent Education Committee:—

G. Pearce & Sons.	£360 0	E. J. Bowles	£295 0
W. Shippam	337 0	H. Dixon, Smarden*	261 10
D. Godden & Son	315 0		
W. H. M. South	296 10		

BLETCHINGLEY.—For erecting a temporary hospital at the Workhouse, for the Godstone Guardians. Mr. G. H. Widger, architect, High-street, Godstone:—

	£	s.	d.	Alternative Tender in Brickwork. £	s.	d.
J. J. Pink	549	0	0	654	0	0
T. E. Dives	559	3	0	612	0	0
T. J. Hawkins & Co.	437	10	0	566	0	0
C. Cooper	476	0	0	523	0	0
G. Lee & Co.	562	11	0		—	
F. W. Honour	498	10	0	530	0	0

BRINDLEY FORD.—For erecting two houses in Bull-lane, for Mr. Thomas Massey. Mr. F. C. Crimes, architect, Kidsgrove:—

C. W. Machin	£410 0	F. T. Winkle	£337 10
E. Bagnall	400 0	Colley & Lindop	336 10
J. Lovatt	400 0	J. W. Phillips	325 0
G. M. Sambrooke	390 0	Colclough & Breeze	310 0
W. Sherratt	380 0	E. R. Hollies	297 10
H. Brereton & Davison	367 17	W. Hancock, Chell, near Tunstall*	295 0

BRIXWORTH.—For building a heating apparatus chamber, etc., All Saints' Church. Messrs. Law & Harris, F.R.I.B.A., architects, 1, Sheep-street, Northampton:—

R. W. Harris	£187 13 9	Beardsmore & West	£135 0 0
E. Green	139 0 0	W. Higgins	129 12 2
H. Martin, Ltd., Northampton*	138 0 0	W. W. Webster	120 0 0

CAMBERWELL.—For a new underground Record Room, etc., at the Town Hall, for the Borough Council. Mr. W. Oxtoby, Borough Engineer, Town Hall, Camberwell:—

G. Parker & Son	£257 0 0	W. V. Goad	£235 0 0
Multon & Wallis	253 0 0	H. Hollingsworth	222 0 0
Thompson Bros.	251 0 0	R. & E. Evans, Lisford-street, Peckham*	219 0 0
H. King & Son	245 0 0		
Webster & Co.	243 19 8		

CHELMSFORD.—For demolition of buildings on the site of No. 83, High-street, and the construction of a public convenience on part of site, for the Town Council. Mr. Cuthbert Brown, A.M.I.C.E., Surveyor. Quantities by Surveyor:—

Allen & Gowers	£893 0 0
Johnson & Hawkes	809 6 1
H. Potter & Son	797 10 0
T. J. Bailey, Writtle, Chelmsford*	778 7 6

DEARHAM (Cumberland).—For erecting three dwelling-houses, for Messrs. Thomas & Roe. Mr. Wilk Serginson, architect and surveyor, Allonby, Maryport. Quantities by architect and surveyor:—

Building, etc.

W. Marshall, 8, Station-street, Maryport*	£310 0 0

Slater.

M. Clark, Netherton, Maryport*	£45 0 0

Plumbing.

T. Maudle & Co., South Quay, Maryport*	£14 0 0

Plastering.

J. C. Perrin, Retson-street, Workington*	£82 0 0

Painting.

R. F. Brocklebank, Grasslet, Maryport*	£10 7 6

Joiner.

J. Mulcaster, Crosby, Maryport*	£148 19 3

DUNGIVEN (Ireland).—For alteration and extension of church, for the Committee of Dungiven Presbyterian Church. Mr. S. Macartney, architect, Dungiven. Quantities by Mr. Robt. Macartney, Portrush and Dungiven:—

R. Colhoun, Strand, Londonderry	£1,000

EASTBOURNE.—For four houses and shops at Church-street. Mr. Carlos Crisford, architect, 49, Gildredge-road, Eastbourne:—

N. Martin & Sons	£2,100 0	J. Martin	£1,690 0
J. Bodle	1,917 0	Sawyer & Son	1,650 0
T. Dunlop	1,900 0	F. Rich	1,388 0
Miller & Selmes	1,868 0	E. Relf*	1,209 10
Bainbridge & Son	1,780 0		

EBBW VALE.—For erecting fifty or more cottages for, Mount Pleasant "Model Cottage" Building Club. Mr. Wm. Harris, architect and surveyor, Bank-chambers, Bargoed:—

	£	s.	d.	£	s.	d.	£	s.	d.
Gradwell & Co.	140	0	0	145	4	0	156	0	0
W. Edwards	135	0	0	137	0	0	147	0	0
A. W. Davies & Co.	125	0	0	135	0	0	150	0	0
Rowland & Davies	124	10	0	133	0	0	147	0	0
H. J. Davis	116	0	0	126	2	6	137	5	6
J. Watkins, Ebbw Vale*	115	15	0	124	10	0	137	0	0

GELLIDOWEL.—For Gellidowel Council School, for the Glamorgan Education Committee. Mr. D. Pugh Jones, F.S.I., County Architect, Cardiff. Quantities by the Architect:—

F. Bond, Beda-road, Cardiff*	£6,949 10 3

GREENWICH.—For erecting depôt buildings, Norman-road, for the Borough Council:—

	Buildings, etc., excluding cart-shed. £	s.	d.		Cart-shed. £	s.	d.
Spencer, Santo, & Co., Ltd.	1,943	0	0‡			—	
F. & G. Foster	1,850	0	0	....	180	0	0
Kirk & Randall	1,734	0	0	....	104	0	0
W. H. Hyde & Co.	1,737	0	0‡			—	
Wood Bros.	1,700	0	0	....	95	0	0
F. W. Western	1,659	0	0	....	120	0	0
W. Mills & Sons	1,640	0	0	....	115	0	0
Newell & Lusty	1,600	0	0	....	98	0	0
E. Thomas, trading as Thomas & Edge	1,597	0	0	....	98	10	0
H. Groves	1,569	0	0	....	112	0	0
F. J. Gorham	1,554	11	0	....	108	0	0
F. Deacon & Son, Addlestone, Surrey*	1,395	0	0	....	71	13	0
Pasterfield & English	1,298	0	0	....	98	0	0

‡ Including cart-shed.

GRIMSBY.—For Catholic mission hall. Messrs. Bentley & Hall, architects, Grimsby:—

W. Ion	£875 0 0	Hewins & Goodhand	£835 15 9
Thompson & Sons, Ltd.	869 15 0	H. W. Parker & Son*	835 0 0
H. Marrows	857 19 0		

HOUNSLOW (Middlesex).—For erecting a cemetery chapel. Messrs. Nowell Parr & Kates, architects, Brunswick House, Brentford, W.:—

J. C. Tennant & Co.	£716 16 0	W. Gibson & Co.	£604 0 0
Sumpter Bros.	650 0 0	Pasterfield & English	599 0 0
Drowley & Co.	647 0 0	F. & S. Forder	594 0 0
Bartley, Sons, & Holness	643 0 0	W. J. Dickens	587 0 0
R. M. Hughes	641 0 0	W. H. Hyde & Co.	583 0 0
A. J. Staines & Co.	633 0 0	H. B. Hanson	574 0 0
C. H. Keen	623 17 6	J. Dorey, Ltd.	566 0 0
Jarman & Co.	623 0 0	W. Lacey, Hounslow	549 0 0
F. D. Hidden	615 0 0		

IPSWICH.—For alterations and additions and new latrines at St. John's Home, for the Guardians. Mr. J. A. Scheuermann, architect, Northgate-street, Ipswich :—

W. Grayston....	£1,193 0	G. Grimwood & Sons	£1,047 0
C. Roper	1,111 0	G. A. Kenney ..	1,040 0
Sadler & Sons ..	1,110 0	S. A. Kenney ..	1,035 0
F. Bennett	1,080 0	C. A. Cundall ..	998 10
W. H. Death ..	1,075 0	C. A. Green	993 0
W. G. Fisk & Co.	1,069 10	A. Gayford	965 10
P. J. Turner....	1,067 0	V. A. Marriott, London-road, Ipswich*	938 10
Spencer, Santo, & Co., Ltd.	1,060 0		
A. J. Linzell	1,053 0		
Cubitt & Gotts..	1,052 0		

LONDON.—For additional stabling, Liverpool-road, Islington, N., for the Islington Borough Council. Mr. James Patten Barber, Borough Surveyor :—

Weibking & Co., Ltd.	£1,414 15	H. E. Percy	£1,098 5
Rawkins & Jackson	1,361 0	F. & G. Foster..	1,080 0
Sabey & Son....	1,305 0	McLoughlin & Harvey, Ltd..	1,077 10
W. Eyre	1,266 10	B. E. Nightingale	1,074 0
Stevens & Sons	1,164 0	A. N. Coles	1,058 0
Mattock & Parsons	1,164 0	C. P. Roberts & Co., 138, St. Paul's-road, N.*	1,019 0
W. Reason	1,159 0	Pasterfield & English	1,017 0
Newel & Lusty..	1,148 0	W. H. Hyde & Co.	1,000 0
H. H. Hollingsworth.....	1,124 0		

LONDON.—For the erection of additional offices, for the Royal London Mutual Insurance Society, in Finsbury-square. Mr. John Belcher, R.A., architect :—

C. Wall.....	£27,307	Kerridge & Shaw..	£24,473
Holland & Hannen	25,954	H. L. Holloway ..	24,368
Foster & Dicksee..	25,605	W. Downs	24,150
Cubitt	25,525	H. & H. F. Higgs	23,933
Trollope & Colls ..	24,994	H. J. Williams, Ltd.	23,900
E. Lawrance & Sons	24,601	Simpson & Sons ..	23,881
Higgs & Hill	24,594	W. Lawrance	23,862
J. Carmichael	24,569	Holloway Bros. ..	23,500
Waring White Building Co.....	24,569	Godson & Sons ..	23,442
Prestige & Co.....	24,554	Spencer, Santo, & Co.	23,359

NORWICH.—For heating the Guildhall and Municipal Offices, for the Corporation. Mr. Arthur E. Collins, M.Inst.C.E., City Engineer, Guildhall, Norwich :—

Boulton & Paul, Rose-lane Works, Norwich* £398

[The Council also arranged with the firm to supply hot water to lavatories, sinks, etc., throughout the two ranges of buildings for £135.]

PENCOED.—For additions to Pencoed Council School, for the Glamorgan Education Committee. Mr. D. Pugh Jones, F.S.I., County Architect, Cardiff. Quantities by the Architect :—

W. Williams, Pearl-street, Cardiff* £1,600

POOLE.—For erecting a pair of semi-detached cottages at the Corfe Mullen Pumping Station, for the Corporation :—

Baker & Pearcey, Parkstone* £526

PORTH.—For painting club premises, for the Committee of the Wyndham Constitutional Club. Mr. A. E. Trotman, architect, South Lea, Mount Pleasant, Porth :—

Tilling & Sons..	£123 19 9	F. J. Hughes ..	£83 15 0
A. Ireland, Riverside Cottage, Porth*..	115 0 0	E. J. Staples ..	79 18 0
R. Trapnell	93 0 0	A. J. & C. Chandler	69 10 0
D. R. Bradbury	91 14 0	Cooper Bros. ..	56 0 0

STRATFORD-UPON-AVON.—For erecting a villa residence, for Mr. W. S. Brassington, F.S.A. Mr. E. G. Holtom, architect and surveyor, 58, Henby-street, Stratford-on-Avon :—

J. G. Fincher & Co.	£1,355	J. Harris & Sons ..	£1,239
R. Fenwick, Ltd. ..	1,350	W. H. James	1,235
G. Huins & Son....	1,305	E. T. Kennard	1,200
W. J. Bloxham	1,295	G. Whateley & Sons	1,130
J. Barnsley & Sons	1,288	R. Harris & Co.....	1,127
R. Bowen	1,275	G. Mobbs	1,119
E. L. Turner	1,265	J. Cox, Stratford-on-Avon*	1,110
J. S. Kimberly	1,250		

STRATTON ST. MARGARET.—For making up Pump-lane, for Highworth Rural District Council :—

H. Iles, Stratton St. Margaret* £229 15 0

THORNABY-ON-TEES.—For new street works, for the Corporation. Mr. C. T. Johnson, Borough Engineer, Town Hall, Thornaby-on-Tees :—

C. H. Hollis	£90 7 5	M. O'Doherty & Son, Stockton-on-Tees*	£80 5 8
T. Hunt	87 14 0		
A. E. Hobbs	82 1 7		

THORNBURY (Gloucestershire).—For removing and re-erecting on land at Milbury Heath three houses at Royal Edward Dock, Avonmouth. Mr. Francis J. Williams, surveyor, Chapel-street, Thornbury :—

W. W. Pitcher....	£330 0	T. Ball, Morton, Thornbury	£123 14
Tucker Bros.	228 0		

[There is 51 sq. of roofing to be covered with felt and interlocking tiles, and 10*l.* for contingencies; if the latter does not arise, then 10*l.* deducted.]

TOTTENHAM. — For rebuilding the Tottenham Grammar School, for the Foundation Governors. Mr. H. G. Crothall, Architect to the Middlesex Education Committee :—

F. G. Minter	£12,320	Rowley Bros.	£11,627
Leslie & Co.....	12,191	W. J. Renshaw ..	11,393
Holloway Bros. ..	12,099	Mattock Bros.....	11,077
J. Stewart	12,021	A. Fairhead & Son	11,067
W. Johnson & Co., Ltd.	11,985	Treasure & Son, Ltd.	10,909
Ford & Walton, Ltd.	11,924	G. Neal.....	10,698
E. Lawrance & Son	11,817	A. Porter	10,482
Fitch & Cox.....	11,788	H. Knight & Son ..	10,437
W. Lawrence & Son	11,694	Brand, Pettitt, & Co.‡	10,327

‡ Recommended for acceptance.

WEMBLEY PARK (Middlesex).—For oak fencing. Mr. D. B. Hedderwick, architect, 38, Great James-street, Bedford-row, W.C. :—

E. G. Brown ..	£234 0 0	A. Turner & Son	£147 13 6
H. Haynes	162 8 0	M. Marshall	146 16 6
H. Underwood ..	159 9 4	B. Horton & Son	140 0 0
J. T. Brooker ..	150 0 0	T. Turner & Co., Watford*	139 17 6
R. Batcheller ..	147 15 6		

WOODHALL SPA.—For laying 1,000 yds. super. of limestone tar macadam on footpaths, for the Urban District Council. Mr. E. E. T. Bolton, Surveyor, Woodhall Spa :—

	Per yard.
	s. d.
Constable, Hart, & Co., Matlock Bridge, Derbyshire	1 6

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